```
=> d his

     (FILE 'HOME' ENTERED AT 08:20:12 ON 26 JAN 2005)
               DEL HIS

     FILE 'REGISTRY' ENTERED AT 08:22:40 ON 26 JAN 2005
L1            82 S KAEYKKNKHRH|TTRLTRKRGLK|RLTRKRGLK/SQSP
               SAV L1 HOPE657/A

     FILE 'HCAPLUS' ENTERED AT 08:31:59 ON 26 JAN 2005
L2            48 S L1
L3            26 S L2 AND (PY<=1997 OR PRY<=1997 OR AY<=1997)
L4             2 S (US20040235730 OR US20020147304 OR US6670452)/PN OR (US2003-6
               E HALBERT G/AU
L5            56 S E3,E4,E7-E9
               E OWENS M/AU
L6            38 S E3,E5
               E OWENS MOIRA/AU
L7             2 S E4
               E BAILLIE G/AU
L8            49 S E3-E11
L9             5 S L2 AND L5-L8
L10            2 S L2 AND L4
L11            5 S L4,L9,L10
L12           23 S L3 NOT L11
               E LIPOPROTEIN/CW
L13           24 S E3,E4 AND L11,L12
               E LIPOPROTEIN RECEPTOR/CT
L14           24 S E4+OLD,NT,PFT,RT AND L11,L12
               E LIPOPROTEINS/CT
L15           25 S E3+OLD,NT,PFT,RT AND L11,L12
               E APOLIPOPROTEIN/CT
               E E16+ALL
L16            7 S E2 AND L11,L12
               E APOLIPOPROTEINS/CT
L17           21 S E3+OLD,NT,PFT,RT AND L11,L12
L18            7 S E13 AND L11,L12

     FILE 'REGISTRY' ENTERED AT 10:28:04 ON 26 JAN 2005
L19           19 S (LYSINE OR ALANINE OR GLUTAMINE OR TYROSINE OR ASPARAGINE OR
L20            9 S (D-LYSINE OR D-ALANINE OR D-GLUTAMINE OR D-TYROSINE OR D-ASPA
L21           17 S 122-32-7 OR 303-43-5 OR 58-22-0 OR 52-39-1 OR 50-28-2 OR 50-3
L22            2 S 57-88-5 OR 302-79-4
L23            1 S 129-00-0
L24            2 S 3352-57-6 OR 2564-86-5

     FILE 'HCAPLUS' ENTERED AT 10:45:56 ON 26 JAN 2005
L25            1 S L19,L20 AND L11,L12,L3
L26            1 S L24 AND L11,L12,L3
L27            2 S L21,L23 AND L11,L12,L3
L28            6 S L22 AND L11,L12,L3
L29            6 S L25-L28
L30            5 S L11,L29 AND L13-L18
L31            6 S L29,L30
L32            5 S L12-L18 AND L31
L33            6 S L31,L32
L34           22 S L12-L18 NOT L33
               SEL DN AN 7
L35            1 S L34 AND E1-E3
L36            7 S L33,L35
L37            2 S L34 AND (BIOCHEM?(L)METHOD?)/SC,SX
               E LIPOPROTEIN RECEPTOR/CT
L38         3433 S E4-E36
```

```
                E E4+ALL
L39          5861 S E4,E3+NT
L40          5861 S L38,L39
                E E23
                E APOLIPOPROTEIN/CT
L41          4178 S E57-E60
                E E47+ALL
L42         21890 S E4,E3,E20-E23
L43         21218 S E3+NT
L44           293 S L40 AND L41
L45          1263 S L40 AND L42
L46          1232 S L40 AND L43
L47           660 S L44-L46 AND (PY<=1997 OR PRY<=1997 OR AY<=1997)
                E PEPTIDE/CW
L48            14 S L47 AND E3,E4
                E PEPTIDE/CT
L49            77 S E88+OLD,NT,PFT,RT AND L47
L50            14 S PEPTIDE?/CT,CW AND L47
L51            77 S L48,L49,L50
                E AMINO GROUP/CT
                E E3+ALL
L52             2 S L51 AND E2
                E CARBOXYL GROUP/CT
                E E3+ALL
L53             1 S L51 AND E3
                E HYDROXYL GROUP/CT
                E E3+ALL
L54             1 S E2 AND L51
L55             2 S L52-L54
L56             9 S L36,L37,L55
L57            75 S L51 NOT L56
                SEL DN AN 17 51
L58             2 S L57 AND E1-E6
L59            11 S L56,L58 AND L2-L18,L25-L58

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 12:46:39 ON 26 JAN 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)


Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.
The CA Lexicon is the copyrighted intellectual property of the
the American Chemical Society and is provided to assist you in searching
databases on STN.  Any dissemination, distribution, copying, or storing
of this information, without the prior written consent of CAS, is
strictly prohibited.

FILE COVERS 1907 - 26 Jan 2005  VOL 142 ISS 5
FILE LAST UPDATED: 25 Jan 2005  (20050125/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


=> d l59 all tot

L59  ANSWER 1 OF 11  HCAPLUS  COPYRIGHT 2005 ACS on STN
AN   2004:1019756  HCAPLUS
```

DN 142:2504
ED Entered STN: 26 Nov 2004
TI Non-naturally occurring low density lipoprotein particles possessing Apo B receptor competency
IN **Halbert, Gavin William; Owens, Moira Doreen; Baillie, George**
PA University of Strathclyde, UK
SO U.S. Pat. Appl. Publ., 36 pp., Cont.-in-part of U.S. Ser. No. 269,533.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K038-17
ICS C07K014-775
NCL 514012000; 530359000
CC 6-3 (General Biochemistry)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	US 2004235730	A1	20041125	US 2003-657404	20030908	<--
	WO 9813385	A2	19980402	WO 1997-GB2610	19970925	<--
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG					
	US 2002147304	A1	20021010	US 1999-269533	19990601	<--
	US 6670452	B2	20031230			
PRAI	GB 1996-20153	A	19960927	<--		
	WO 1997-GB2610	W	19970925	<--		
	US 1999-269533	A2	19990601	<--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
US 2004235730	ICM	A61K038-17	
	ICS	C07K014-775	
	NCL	514012000; 530359000	
WO 9813385	ECLA	A61K009/127M; C07K014/775	<--
US 2002147304	ECLA	A61K009/127M; C07K014/775	<--

AB The present invention provides a non-naturally occurring, receptor competent LDL particle comprising at least a binding site for an Apo B protein receptor and at least one lipophilic substituent. A non-naturally occurring LDL must be receptor competent capable of binding to Apo B receptors and/or capable of eliciting an Apo B protein-like physiol. effect on and/or after binding. Thus, the non-naturally occurring LDL particle comprises at least a sequence of amino acids such as a protein, polypeptide or peptide capable of binding to Apo B receptors, which polypeptide may or may not be identical in respect of its binding region with the amino acid sequence of an Apo-B binding site, for example, an Apo B 100 binding site or physiol. functional peptide analogs thereof. Naturally, the skilled addressee will appreciate that the polypeptide capable of binding to Apo B receptors on target cells, such as cancer cells expressing Apo B receptors, is able to elicit an Apo B protein-like physiol. effect on and/or after binding to be receptor competent.

ST LDL lipoprotein particle ApoB receptor peptide sequence
IT Fatty acids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(C10-C22; non-naturally occurring low d. lipoprotein particles possessing Apo B receptor competency)
IT **Lipoprotein receptors**
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(**LDL**; non-naturally occurring **low d.**
lipoprotein particles possessing Apo B receptor competency)

IT **Lipoprotein receptors**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**apolipoprotein B**; non-naturally occurring
low d. lipoprotein particles possessing Apo B
receptor competency)

IT **Proteins**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cholesterol ester-exchanging; non-naturally occurring low d.
lipoprotein particles possessing Apo B receptor competency)

IT Cytotoxic agents
(lipid soluble; non-naturally occurring low d. lipoprotein particles
possessing Apo B receptor competency)

IT **Peptides, biological studies**
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified);
PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)
(lipophilic; non-naturally occurring low d. lipoprotein particles
possessing Apo B receptor competency)

IT **Lipoproteins**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(low-d.; non-naturally occurring low d. lipoprotein particles
possessing **Apo B** receptor competency)

IT **Amino group**
Lipophilicity
(non-naturally occurring low d. lipoprotein particles possessing Apo B
receptor competency)

IT Hormones, animal, biological studies
Steroids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(non-naturally occurring low d. lipoprotein particles possessing Apo B
receptor competency)

IT **136826-31-8 205647-99-0 205648-00-6**
RL: BSU (Biological study, unclassified); BUU (Biological use,
unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(Apo B protein-binding peptide sequence; non-naturally occurring low d.
lipoprotein particles possessing Apo B receptor competency)

IT **50-28-2**, Estradiol, biological studies **50-32-8**,
Benzo[a]pyrene, biological studies **52-39-1**, Aldosterone
57-41-0, Diphenylhydantoin **57-88-5**, Cholesterol,
biological studies **58-22-0**, Testosterone **59-05-2D**,
Methotrexate, diester **66-76-2**, Bishydroxycoumarin
76-74-4, Pentobarbital **122-32-7**, Triolein
129-00-0, Pyrene, biological studies **302-79-4**, Retinoic
acid **2564-86-5**, Carboxyl **3352-57-6**, Hydroxyl,
biological studies **7235-40-7**, β-Carotene **13345-21-6**
, 3-Hydroxybenzopyrene **13345-25-0 25338-56-1**, Pyrene
butyric acid **33419-42-0**, Etoposide **56124-62-0**, AD-32
94731-66-5
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(non-naturally occurring low d. lipoprotein particles possessing Apo B
receptor competency)

IT **303-43-5D**, Cholesteryl oleate, PCMA
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(perfluorinated; non-naturally occurring low d. lipoprotein particles
possessing Apo B receptor competency)

IT **192937-44-3 192937-45-4 192937-46-5**
205648-03-9 **798567-07-4 798567-08-5**
RL: PRP (Properties)
(unclaimed sequence; non-naturally occurring low d. lipoprotein
particles possessing Apo B receptor competency)

L59 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:111563 HCAPLUS
DN 136:322611
ED Entered STN: 11 Feb 2002
TI A synthetic low density lipoprotein particle capable of supporting U937 proliferation in vitro
AU **Baillie, G.; Owens, M. D.; Halbert, G. W.**
CS Department of Pharmaceutical Sciences, Strathclyde Institute for Biomedical Sciences, University of Strathclyde, Glasgow, G4 0NR, UK
SO Journal of Lipid Research (2002), 43(1), 69-73
CODEN: JLPRAW; ISSN: 0022-2275
PB Lipid Research, Inc.
DT Journal
LA English
CC 13-6 (Mammalian Biochemistry)
AB A synthetic LDL (sLDL) has been prepared by combining a lipid microemulsion with amphipathic peptides containing the apoprotein B receptor domain. The biol. properties of sLDL have been investigated using the U937 in vitro cell proliferation assay. SLDL exhibits concentration dependent and saturable stimulation of U937 proliferation. By utilizing different amphipathic peptides, variable proliferation is achieved, indicating a specific interaction between sLDL and the U937 LDL receptor are possible. U937 proliferation is reduced by the addition of an anti-LDL receptor antibody, indicating that sLDL is assimilated via the LDL receptor pathway. The behavior of sLDL mimics that of native LDL, and this approach represents a viable technique for the production of an sLDL particle on a large scale for research and general application.
ST synthetic LDL particle U937 cell proliferation
IT **Lipoprotein receptors**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**LDL**; synthetic **low d.** lipoprotein particle capable of supporting U937 proliferation in vitro)
IT Animal cell line
(U937; synthetic low d. lipoprotein particle capable of supporting U937 proliferation in vitro)
IT **Lipoproteins**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(low-d.; synthetic low d. lipoprotein particle capable of supporting U937 proliferation in vitro)
IT Cell proliferation
(synthetic low d. lipoprotein particle capable of supporting U937 proliferation in vitro)
IT **57-88-5**, Cholesterol, biological studies **302-79-4**, Retinoic acid **412944-00-4 412944-01-5 412944-02-6 412944-03-7**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(synthetic low d. lipoprotein particle capable of supporting U937 proliferation in vitro)
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Allain, C; Clin Chem 1974, V20, P470 HCAPLUS
(2) Brown, M; Angew Chem Int Ed Engl 1986, V25, P583
(3) Deckelbaum, R; J Biol Chem 1977, V252, P744 HCAPLUS
(4) Eley, J; Int J Pharm 1990, V63, P121 HCAPLUS
(5) Esfahani, M; J Cell Biochem 1984, V25, P87 HCAPLUS
(6) Filipowska, D; Cant Chemother Pharmacol 1992, V29, P396 MEDLINE
(7) Firestone, R; Bioconjugate Chemistry 1994, V5, P105 HCAPLUS
(8) Frostegard, J; J Lipid Res 1990, V31, P37 MEDLINE
(9) Ginsburg, G; J Biol Chem 1982, V257, P8216 HCAPLUS
(10) Knott, T; Nature 1986, V323, P734 HCAPLUS
(11) Lundberg, B; Biochim Biophys Acta 1993, V1149, P305 HCAPLUS
(12) Milne, R; J Biol Chem 1989, V264, P19754 HCAPLUS
(13) Owens, M; Eur J Pharm Biopharm 1995, V41, P120 HCAPLUS
(14) Owens, M; J Pharm Pharmacol 1993, V45(Suppl), P68P

(15) Patsch, J; J Lipid Res 1974, V15, P356 HCAPLUS
(16) Pullinger, C; J Lipid Res 1999, V40, P318 HCAPLUS
(17) Rothblat, G; In Vitro 1976, V12, P554 HCAPLUS
(18) Schewe, C; Eur J Clin Invest 1994, V24, P36 MEDLINE
(19) Schumaker, V; Advances in Protein Chemistry 1994, V45, P205 HCAPLUS
(20) Sundstrom, C; Int J Canc 1976, V17, P565 MEDLINE
(21) van Den Brock, A; Clin Chem 1994, V40, P395
(22) Vanberkel, T; J Biol Chem 1985, V260, P2694 HCAPLUS
(23) Yang, C; Nature 1986, V323, P738 HCAPLUS

L59 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:701805 HCAPLUS
DN 137:67994
ED Entered STN: 26 Sep 2001
TI Physicochemical properties of microemulsion analogues of low density lipoprotein containing amphipathic apoprotein B receptor sequences
AU **Owens, M. D.; Baillie, G.; Halbert, G. W.**
CS Strathclyde Institute for Biomedical Sciences, Department of Pharmaceutical Sciences, University of Strathclyde, Glasgow, G4 0NR, UK
SO International Journal of Pharmaceutics (2001), 228(1-2), 109-117
CODEN: IJPHDE; ISSN: 0378-5173
PB Elsevier Science B.V.
DT Journal
LA English
CC 63-5 (Pharmaceuticals)
AB Low d. lipoprotein (LDL) has been proposed as a drug targeting vector in cancer chemotherapy, however, research has been limited due to the necessity to isolate material from plasma. In this study, the physicochem. properties of synthetic lipid microemulsions containing an amphipathic version of the apoprotein B receptor binding sequence have been examined The effect of peptide sequence length, lipid anchor type and location along with microemulsion lipid composition were investigated via changes in particle size and zeta potential. Size increases were related to the amphipathic peptides lipophilic portion and to a lesser extent by amino acid sequence length. Two lipophilic anchors, retinoic acid and cholesterol, produced large size increases while a single anchor (retinoic acid) did not affect size. The amphipathic peptide reversed measured zeta potential from neg. to pos. values in a concentration-dependent manner. This was related to peptide structure and could be effected by changes in pH, indicating that the peptide was surface located and responsive to the external environment. Alteration of microemulsion lipid composition also affected physicochem. properties but to a lesser degree than changes in the amphipathic peptide. These novel systems may represent a useful synthetic alternative to native LDL for a variety of applications.
ST microemulsion LDL analog apoprotein B receptor drug delivery
IT **Lipoprotein receptors**
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**apolipoprotein B**; microemulsion analogs of **low d.** lipoprotein containing amphipathic apoprotein B receptor sequences)
IT Drug delivery systems
Drug delivery systems
(microemulsion analogs of low d. lipoprotein containing amphipathic apoprotein B receptor sequences)
IT Drug delivery systems
(microemulsions; microemulsion analogs of low d. lipoprotein containing amphipathic apoprotein B receptor sequences)
IT **57-88-5D**, Cholesterol, conjugates **302-79-4D**, Retinoic acid, conjugates
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process);

USES (Uses)
(microemulsion analogs of low d. lipoprotein containing amphipathic apoprotein B receptor sequences)
IT **412944-00-4 412944-01-5 412944-02-6**
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(microemulsion analogs of low d. lipoprotein containing amphipathic apoprotein B receptor sequences)
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Allain, C; Clin Chem 1974, V20, P470 HCAPLUS
(2) Baillie, G; Proc Intern Symp Control Relat Bioact Mater 1994, V21, P1135
(3) Brown, M; Angew Chem Int Ed Engl 1986, V25, P583
(4) Darke, A; J Mol Biol 1972, V63, P265 HCAPLUS
(5) Eley, J; Int J Pharm 1990, V63, P121 HCAPLUS
(6) Filipowska, D; Cancer Chemother Pharmacol 1992, V29, P396 MEDLINE
(7) Gal, D; Am J Obstet Gynecol 1981, V139, P877 HCAPLUS
(8) Ginsburg, G; J Biol Chem 1982, V257, P8216 HCAPLUS
(9) Halbert, G; Int J Pharm 1984, V21, P219 HCAPLUS
(10) Hynds, S; Biochim Biophys Acta 1984, V795, P589 HCAPLUS
(11) Illum, L; Int J Pharm 1982, V12, P135 HCAPLUS
(12) Knott, T; Nature 1986, V323, P734 HCAPLUS
(13) Lundberg, B; Biochim Biophys Acta 1993, V1149, P305 HCAPLUS
(14) Myant, N; Atherosclerosis 1993, V104, P1 MEDLINE
(15) Owens, M; Eur J Pharm Biopharm 1995, V41, P120 HCAPLUS
(16) Owens, M; Pharm Res 1991, V8, PS182
(17) Skipski, V; Biochem J 1967, V104, P340 HCAPLUS
(18) Spady, D; Lipoproteins as Carriers of Pharmacological Agents 1991, P1 HCAPLUS
(19) Tucker, I; J Pharm Pharmacol 1983, V35, P705 HCAPLUS
(20) Vanberkel, T; J Biol Chem 1985, V260, P2694 HCAPLUS
(21) Washington, C; Particle Size Analysis in Pharmaceutics and Other Industries: Theory and Practice 1992
(22) Yang, C; Nature 1986, V323, P738 HCAPLUS

L59 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:210766 HCAPLUS
DN 128:275115
ED Entered STN: 15 Apr 1998
TI Nonnaturally occurring receptor-competent LDL particle
IN **Halbert, Gavin William; Owens, Moira Doreen; Baillie, George**
PA University of Strathclyde, UK
SO PCT Int. Appl., 74 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07K014-775
ICS A61K009-127
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 9
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9813385	A2	19980402	WO 1997-GB2610	19970925 <--

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

CA 2267650	AA	19980402	CA 1997-2267650	19970925	<--
AU 9744667	A1	19980417	AU 1997-44667	19970925	<--
EP 956303	A2	19991117	EP 1997-943050	19970925	<--
R: CH, DE, FR, GB, IT, LI, SE					
JP 2001501206	T2	20010130	JP 1998-515401	19970925	<--
US 2002147304	A1	20021010	US 1999-269533	19990601	<--
US 6670452	B2	20031230			
US 2004235730	A1	20041125	US 2003-657404	20030908	<--
PRAI GB 1996-20153	A	19960927	<--		
WO 1997-GB2610	W	19970925	<--		
US 1999-269533	A2	19990601	<--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
WO 9813385	ICM	C07K014-775	
	ICS	A61K009-127	
WO 9813385	ECLA	A61K009/127M; C07K014/775	<--
US 2002147304	ECLA	A61K009/127M; C07K014/775	<--

AB A nonnaturally occurring receptor competent LDL particle is provided which comprises ≥1 peptide component having at least a binding site for an Apo B protein receptor and ≥1 lipophilic substituent. The particle of the invention has LDL receptor competency, but does require the use of substantially whole apo B, which is difficult to to graft onto microemulsion particles. The particle of the invention may be used as a drug-targeting vector in the treatment of cancer cells having apo B receptors. The particles may also be used in a cell culture medium as a supplement for cell growth.

ST nonnatural LDL particle apoB receptor peptide; antitumor targeting nonnatural LDL particle; culture cell growth supplement LDL particle

IT **Apolipoproteins**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**B**; nonnaturally occurring receptor-competent LDL particle with apo-**B** receptor-binding peptide, and uses thereof)

IT Fatty acids, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(C10-22, peptide reaction products; nonnaturally occurring receptor-competent LDL particle with apo-B receptor-binding peptide, and uses thereof)

IT **Lipoprotein receptors**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**LDL**; nonnaturally occurring receptor-competent **LDL** particle with apo-B receptor-binding peptide, and uses thereof)

IT **Peptides, biological studies**
Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(apo-B receptor-binding; nonnaturally occurring receptor-competent LDL particle with apo-B receptor-binding peptide, and uses thereof)

IT Growth factors, animal
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(cell growth supplement; nonnaturally occurring receptor-competent LDL particle with apo-B receptor-binding peptide, and uses thereof)

IT Amphiphiles
(lipids; nonnaturally occurring receptor-competent LDL particle with apo-B receptor-binding peptide, and uses thereof)

IT Lipophilicity
(lipophilic mols.; nonnaturally occurring receptor-competent LDL particle with apo-B receptor-binding peptide, and uses thereof)

IT **Lipoproteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(low-d.; nonnaturally occurring receptor-competent LDL particle with **apo-B** receptor-binding peptide, and uses thereof)

IT Emulsions
(microemulsions; nonnaturally occurring receptor-competent LDL particle with apo-B receptor-binding peptide, and uses thereof)

IT Animal tissue culture
Antitumor agents
Cell proliferation
Drug delivery systems
Drug targeting
Particle size
Zeta potential
(nonnaturally occurring receptor-competent LDL particle with apo-B receptor-binding peptide, and uses thereof)

IT Estrogens
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(nonnaturally occurring receptor-competent LDL particle with apo-B receptor-binding peptide, and uses thereof)

IT Lipids, biological studies
Phosphatidylcholines, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(nonnaturally occurring receptor-competent LDL particle with apo-B receptor-binding peptide, and uses thereof)

IT **Amino group**
Carboxyl group
Hydroxyl group
(peptide component containing; nonnaturally occurring receptor-competent LDL particle with apo-B receptor-binding peptide, and uses thereof)

IT Biological transport
(uptake, receptor-mediated; nonnaturally occurring receptor-competent LDL particle with apo-B receptor-binding peptide, and uses thereof)

IT **57-88-5**, Cholesterol, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(nonnaturally occurring receptor-competent LDL particle with apo-B receptor-binding peptide, and uses thereof)

IT **57-88-5D**, Cholesterol, peptide reaction products **122-32-7**, Triolein **302-79-4D**, Retinoic acid, peptide reaction products **303-43-5**, Cholesteryl oleate **192937-45-4D**, reaction products with retinoic acid **192937-46-5D**, reaction products with retinoic acid **205647-99-0 205647-99-0D**, dimers **205648-00-6 205648-00-6D**, dimers **205648-01-7D**, reaction products with retinoic acid **205648-02-8D**, reaction products with retinoic acid 205648-03-9D, reaction products with retinoic acid
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(nonnaturally occurring receptor-competent LDL particle with apo-B receptor-binding peptide, and uses thereof)

IT 40957-95-7
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(nonnaturally occurring receptor-competent LDL particle with apo-B receptor-binding peptide, and uses thereof)

IT **56-40-6**, Glycine, biological studies **56-40-6D**, Glycine, analogs, biological studies **56-41-7**, L-Alanine, biological

studies **56-41-7D**, L-Alanine, analogs, biological studies **56-85-9**, L-Glutamine, biological studies **56-85-9D**, L-Glutamine, analogs, biological studies **56-87-1**, Lysine, biological studies **56-87-1D**, L-Lysine, analogs, biological studies **60-18-4**, L-Tyrosine, biological studies **60-18-4D**, L-Tyrosine, analogs, biological studies **61-90-5**, L-Leucine, biological studies **61-90-5D**, L-Leucine, analogs, biological studies **70-47-3**, L-Asparagine, biological studies **70-47-3D**, L-Asparagine, analogs, biological studies **71-00-1**, L-Histidine, biological studies **71-00-1D**, L-Histidine, analogs, biological studies **72-19-5**, L-Threonine, biological studies **72-19-5D**, L-Threonine, analogs, biological studies **74-79-3**, L-Arginine, biological studies **74-79-3D**, L-Arginine, analogs, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(peptide containing; nonnaturally occurring receptor-competent LDL particle with apo-B receptor-binding peptide, and uses thereof)

L59 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1997:463843 HCAPLUS
DN 127:140338
ED Entered STN: 24 Jul 1997
TI Interaction of amphipathic apoprotein B receptor peptides with microemulsions
AU **Halbert, G. W.**; **Owens, M. D.**; Baille, G. S.
CS Department of Pharmaceutical Sciences, Strathclyde University, Glasgow, G1 1XW, UK
SO Proceedings of the International Symposium on Controlled Release of Bioactive Materials (**1997**), 24th, 797-798
CODEN: PCRMEY; ISSN: 1022-0178
PB Controlled Release Society, Inc.
DT Journal
LA English
CC 63-5 (Pharmaceuticals)
AB Peptide-free microemulsion had an average diameter of 35 nm and a zeta potential of -12 mV. Addn of apoprotein B receptor peptides dramatically changed these values in a concentration-dependent manner, implying some form of microemulsion-peptide interaction. Pep1 [Leu-Arg-Leu-Thr-Arg-Lys-Arg-Gly-Leu-Lys-Leu] at low concns. does not affect size but induces an instant and almost linear increase in zeta potential. At higher concns. size increases dramatically while zeta potential remains constant Pep2 [Gly-Thr-Thr-Arg-Leu-Thr-Arg-Lys-Arg-Gly-Leu-Lys-Leu] does not significantly alter size at the concns. tested but does produce an increase in zeta potential which eventually reaches a plateau around +12 mV. Pep3 [Tyr-Lys-Leu-Glu-Gly-Thr-Thr-Arg-Leu-Thr-Arg-Lys-Arg-Gly-Leu-Lys-Leu-Ala-Thr-Ala-Leu-Ser] dramatically increases size at low concns. with a concomitant increase in zeta potential. Higher concns. produce a reversal of this effect. It appears that there are peptide interactions with the microemulsion's surface layer that may induce receptor-dependent uptake.
ST apoprotein B receptor peptide microemulsion uptake
IT Zeta potential
(interaction of amphipathic apoprotein B receptor peptides with microemulsions intended for receptor-mediated uptake)
IT Drug delivery systems
(microemulsions; interaction of amphipathic apoprotein B receptor peptides with microemulsions intended for receptor-mediated uptake)
IT Biological transport
(uptake, receptor-mediated; interaction of amphipathic apoprotein B receptor peptides with microemulsions intended for receptor-mediated uptake)
IT **192937-44-3 192937-45-4 192937-46-5**
RL: BPR (Biological process); BSU (Biological study, unclassified); PEP

(Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(interaction of amphipathic apoprotein B receptor peptides with microemulsions intended for receptor-mediated uptake)

IT **57-88-5**, Cholesterol, processes **302-79-4**, Retinoic acid
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(interaction of amphipathic apoprotein B receptor peptides with microemulsions intended for receptor-mediated uptake)

L59 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
AN **1997:425951** HCAPLUS
DN **127:91349**
ED Entered STN: 10 Jul 1997
TI Protein production and protein delivery
IN Treco, Douglas A.; Heartlein, Michael W.; Selden, Richard F.
PA Transkaryotic Therapies, Inc., USA
SO U.S., 50 pp., Cont.-in-part of U.S. Ser. No. 985,586, abandoned.
CODEN: USXXAM
DT Patent
LA English
IC ICM C12N005-06
ICS C12N005-08; C12N015-85
NCL 435240200
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 1, 2, 7, 9, 15
FAN.CNT 10

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	US 5641670	A	19970624	US 1994-243391	19940513	<--
	EP 750044	A2	19961227	EP 1996-202037	19921105	<--
	EP 750044	A3	19970115			
	EP 750044	B1	20020807			
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, SE					
	EP 1221477	A2	20020710	EP 2001-204619	19921105	<--
	EP 1221477	A3	20020724			
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, IE					
	JP 2003174897	A2	20030624	JP 2002-359926	19921105	<--
	US 6063630	A	20000516	US 1994-231439	19940420	<--
	CN 1119545	A	19960403	CN 1994-107587	19940602	<--
	US 5733746	A	19980331	US 1995-406030	19950317	<--
	US 6270989	B1	20010807			
	CA 2190289	AA	19951123	CA 1995-2190289	19950511	<--
	WO 9531560	A1	19951123	WO 1995-US6045	19950511	<--
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT					
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG					
	AU 9525504	A1	19951205	AU 1995-25504	19950511	<--
	AU 709058	B2	19990819			
	EP 759082	A1	19970226	EP 1995-919831	19950511	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE					
	BR 9507874	A	19970819	BR 1995-7874	19950511	<--
	HU 76844	A2	19971128	HU 1996-3144	19950511	<--
	JP 10500570	T2	19980120	JP 1995-529826	19950511	<--
	ZA 9503879	A	19960118	ZA 1995-3879	19950512	<--
	US 6187305	B1	20010213	US 1995-446921	19950518	<--
	US 6214622	B1	20010410	US 1995-446928	19950518	<--
	US 6048524	A	20000411	US 1995-446909	19950522	<--
	US 6048724	A	20000411	US 1995-446911	19950522	<--
	US 5733761	A	19980331	US 1995-451893	19950526	<--

	US 5968502	A	19991019	US 1995-451894	19950526	<--
	FI 9604536	A	19970109	FI 1996-4536	19961112	<--
	NO 9604802	A	19970109	NO 1996-4802	19961112	<--
	US 2003082675	A1	20030501	US 1999-225718	19990106	<--
	US 6565844	B1	20030520	US 1999-312245	19990514	<--
	US 2002155597	A1	20021024	US 1999-328130	19990608	<--
	US 6846676	B2	20050125			
	AU 753372	B2	20021017	AU 1999-47341	19990902	<--
	US 6355241	B1	20020312	US 1999-420861	19991019	<--
	AU 738395	B2	20010920	AU 1999-59536	19991118	<--
	AU 9959536	A1	20000224			
	US 6537542	B1	20030325	US 2000-549697	20000414	<--
	CN 1346887	A	20020501	CN 2001-136069	20010929	<--
	US 2003147868	A1	20030807	US 2002-299052	20021118	<--
PRAI	US 1991-787840	B2	19911105	<--		
	US 1991-789188	B2	19911105	<--		
	US 1992-911533	B2	19920710	<--		
	US 1992-985586	B2	19921203	<--		
	EP 1992-924367	A3	19921105	<--		
	EP 1996-202037	A3	19921105	<--		
	JP 1993-508767	A3	19921105	<--		
	US 1994-231439	A3	19940420	<--		
	US 1994-243391	A	19940513	<--		
	US 1994-334455	A3	19941104	<--		
	US 1995-406030	A3	19950317	<--		
	WO 1995-US6045	A	19950511	<--		
	US 1995-446921	A1	19950518	<--		
	US 1995-446909	A1	19950522	<--		
	US 1995-451894	A1	19950526	<--		
	US 1998-12364	B1	19980123			
	US 1999-312245	A1	19990514			

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
US 5641670	ICM	C12N005-06	
	ICS	C12N005-08; C12N015-85	
	NCL	435240200	
US 5641670	ECLA	A61K048/00; C07K014/505; C07K014/605; C07K014/61; C12N005/06B; C12N015/67; C12N015/85; C12N015/90B4	<--
EP 750044	ECLA	C07K014/505; C07K014/605; C07K014/61; C12N005/06B; C12N015/85; C12N015/90B4	<--
EP 1221477	ECLA	C07K014/505; C07K014/605; C07K014/61; C12N005/06B16; C12N015/85; C12N015/90B4	<--
US 5733746	ECLA	A61K048/00; C07K014/61; C12N005/06B; C12N009/16; C12N015/67; C12N015/85; C12N015/90B4; C07K014/505; C07K014/565; C07K014/605	<--
WO 9531560	ECLA	C07K014/505; C12N015/67; C12N015/85; C12N015/90	<--
US 6048524	ECLA	A61K048/00; C07K014/505; C07K014/605; C07K014/61; C12N005/06B; C12N015/85; C12N015/90B4	<--
US 6048724	ECLA	C07K014/505; C07K014/605; C07K014/61; C12N005/06B; C12N015/85; C12N015/90B4	<--
US 5733761	ECLA	A61K048/00; C07K014/505; C07K014/605; C07K014/61; C12N005/06B; C12N015/85; C12N015/90B4	<--
US 2003082675	ECLA	A61K048/00; C07K014/505; C07K014/52B; C07K014/565; C07K014/605; C07K014/61; C12N009/16; C12N015/67; C12N015/90B4	<--
US 2002155597	ECLA	A61K048/00; C07K014/505; C07K014/605; C07K014/61; C12N005/06B; C12N015/85; C12N015/90B4	<--
US 6355241	ECLA	A61K048/00; C07K014/505; C07K014/605; C07K014/61; C12N005/06B; C12N015/85; C12N015/90B4	<--

AB The invention relates to constructs comprising: a) a targeting sequence; b) a regulatory sequence; c) an exon; and d) an unpaired splice-donor site. The invention further relates to a method of producing protein in

vitro or in vivo comprising the homologous recombination of a construct as described above within a cell. The homologously recombinant cell is then maintained under conditions which will permit transcription and translation, resulting in protein expression. The present invention further relates to homologously recombinant cells, including primary, secondary, or immortalized vertebrate cells, methods of making the cells, methods of homologous recombination to produce fusion genes, methods of altering gene expression in the cells, and methods of making a protein in a cell employing the constructs of the invention.

ST genetic method protein prodn delivery

IT Animal cell line
(2780AD ovarian carcinoma; protein production and protein delivery)

IT **Apolipoproteins**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(A-I, genes encoding; protein production and protein delivery)

IT Animal cell line
(Bowes; protein production and protein delivery)

IT Animal cell line
(Daudi; protein production and protein delivery)

IT **Apolipoproteins**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(E, genes encoding; protein production and protein delivery)

IT **Proteins, specific or class**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(F, genes encoding; protein production and protein delivery)

IT Animal cell line
(HL-60; protein production and protein delivery)

IT Animal cell line
(HT-1080; protein production and protein delivery)

IT Metallothioneins
RL: BPN (Biosynthetic preparation); PEP (Physical, engineering or chemical process); BIOL (Biological study); PREP (Preparation); PROC (Process)
(I, genes encoding, regulatory element of; protein production and protein delivery)

IT Animal cell line
(JURKAT; protein production and protein delivery)

IT Animal cell line
(K562; protein production and protein delivery)

IT Animal cell line
(KB; protein production and protein delivery)

IT **Lipoprotein receptors**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**LDL**, genes encoding; protein production and protein delivery)

IT Animal cell line
(MCF-7; protein production and protein delivery)

IT Animal cell line
(Molt 4; protein production and protein delivery)

IT Animal cell line
(Namalwa; protein production and protein delivery)

IT Animal cell line
(RPMI 8226; protein production and protein delivery)

IT Animal cell line
(Raji; protein production and protein delivery)

IT Animal cell line
(U937; protein production and protein delivery)

IT Animal cell line
(WI-38-VA13; protein production and protein delivery)

IT Interleukin 2
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antagonists, genes encoding; protein production and protein delivery)

IT Genetic element
RL: BPN (Biosynthetic preparation); PEP (Physical, engineering or chemical process); BIOL (Biological study); PREP (Preparation); PROC (Process)

(cap site; protein production and protein delivery)
IT Antibodies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(catalytic, genes encoding; protein production and protein delivery)
IT Leukemia
(cell lines; protein production and protein delivery)
IT Gene, microbial
RL: BPN (Biosynthetic preparation); PEP (Physical, engineering or chemical process); BIOL (Biological study); PREP (Preparation); PROC (Process)
(dhfr; protein production and protein delivery)
IT Genetic element
RL: BPN (Biosynthetic preparation); PEP (Physical, engineering or chemical process); BIOL (Biological study); PREP (Preparation); PROC (Process)
(exon; protein production and protein delivery)
IT Actins
Collagens, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(genes encoding, regulatory element of; protein production and protein delivery)
IT Antibodies
Antigens
Bone morphogenetic proteins
Cytokines
Globins
Hormones, animal, biological studies
Immunoglobulins
Immunomodulators
Interleukin 1
Interleukin 11
Interleukin 12
Interleukin 2
Interleukin 2 receptors
Interleukin 3
Interleukin 6
Receptors
Transcription factors
Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(genes encoding; protein production and protein delivery)
IT Cytomegalovirus
Simian virus 40
(genes of, regulatory element of; protein production and protein delivery)
IT Gene, microbial
RL: BPN (Biosynthetic preparation); PEP (Physical, engineering or chemical process); BIOL (Biological study); PREP (Preparation); PROC (Process)
(neo; protein production and protein delivery)
IT Plasmids
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(pREPO18; protein production and protein delivery)
IT Gene therapy
Genetic methods
HeLa cell
Molecular cloning
Translation, genetic
cDNA sequences
(protein production and protein delivery)
IT **Proteins, general, preparation**
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(protein production and protein delivery)
IT Gene, animal
RL: BPN (Biosynthetic preparation); PEP (Physical, engineering or chemical process); PRP (Properties); BIOL (Biological study); PREP (Preparation);

PROC (Process)
(protein production and protein delivery)
IT Gene, animal
RL: BPN (Biosynthetic preparation); PEP (Physical, engineering or chemical process); BIOL (Biological study); PREP (Preparation); PROC (Process)
(regulatory; protein production and protein delivery)
IT CD4 (antigen)
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(soluble, genes encoding; protein production and protein delivery)
IT Genetic element
RL: BPN (Biosynthetic preparation); PEP (Physical, engineering or chemical process); BIOL (Biological study); PREP (Preparation); PROC (Process)
(splice-donor site; protein production and protein delivery)
IT Interferons
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(β, genes encoding; protein production and protein delivery)
IT Transforming growth factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(β-, genes encoding; protein production and protein delivery)
IT Interferons
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(γ, genes encoding; protein production and protein delivery)
IT 9002-68-0, Follicle stimulating hormone 9002-71-5, Tsh
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(genes encoding β-chain; protein production and protein delivery)
IT 37250-24-1, HMG-CoA reductase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(genes encoding, regulatory element of; protein production and protein delivery)
IT 9000-94-6, Antithrombin III 9001-24-5, Blood coagulation factor v 9001-25-6, Blood coagulation factor vii 9001-28-9, Blood coagulation factor ix 9001-29-0, Blood coagulation factor x 9002-64-6, Parathyroid hormone 9002-72-6, Growth hormone 9003-98-9, Dnase 9004-10-8, Insulin, biological studies 9007-12-9, Calcitonin **9007-92-5**, Glucagon, biological studies 9013-56-3, Blood coagulation factor xiii 9025-35-8, α-Galactosidase 9036-22-0, Tyrosine hydroxylase 9039-53-6, Urokinase 9041-92-3, α1-Antitrypsin 9054-89-1, Superoxide dismutase 9061-61-4, Nerve growth factor 11096-26-7, Erythropoietin 12629-01-5, Human growth hormone 37228-64-1, Glucocerebrosidase 61912-98-9, Insulin-like growth factor 83869-56-1, Granulocyte-macrophage colony-stimulating factor 118549-37-4, Insulinotropin 139639-23-9, Tissue plasminogen activator 141436-78-4, Protein kinase C
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(genes encoding; protein production and protein delivery)

L59 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
AN **1997:132863** HCAPLUS
DN **126:144561**
ED Entered STN: 28 Feb 1997
TI Preparation of peptides binding to low-density lipoproteins
IN Hatanaka, Yoshihiro; Aritomi, Masaharu
PA Asahi Kasei Kogyo Kabushiki Kaisha, Japan; Asahi Medical Co., Ltd.
SO PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM C07K005-078
ICS C07K005-097; C07K005-117; C07K007-06; C07K005-06; C07K005-08; C07K005-10; A61K038-04
CC 34-3 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 1
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9700889	A1	19970109	WO 1996-JP1734	19960621 <--
	W: JP, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 838472	A1	19980429	EP 1996-918883	19960621 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 6127339	A	20001003	US 1997-981122	19971218 <--
PRAI	JP 1995-176904	A	19950621 <--		
	WO 1996-JP1734	W	19960621 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9700889	ICM	C07K005-078
	ICS	C07K005-097; C07K005-117; C07K007-06; C07K005-06; C07K005-08; C07K005-10; A61K038-04
WO 9700889	ECLA	C07K005/06H1B; C07K005/08H1; C07K005/10H; C07K007/06A; C07K017/00 <--
EP 838472	ECLA	C07K005/06H1B; C07K005/08H1; C07K005/10H; C07K007/06A; C07K017/00 <--

AB Peptides for binding low-d. lipoproteins (LDLs) characterized in that each peptide has an amino acid sequence represented by formula (X1)p-(α)m-(X2)q-(β)n-(X3)r or (X1)p-(β)n-(X2)q-(α)m-(X3)r [E = elec. charge E defined by [(number of functional groups having pos. charge in the peptide) - (number of functional groups having neg. charge in the peptide)] and satisfying the condition of +1≤E≤+4; α = Phe or Trp; β = Arg or Lys; X1, X2, X3 = an arbitrary amino acid residue; m, n, p, q and r satisfy the condition of 2≤m+n+p+q+≤10; m and n satisfy the condition of 2≤m+n≤10 and 1≤m,n≤9; and p, q and r satisfy the conditions of 0≤p+q+r≤8, 0≤p,r≤8 and 0≤q≤5] are prepared An adsorbent comprising above peptide bonded directly or through a spacer to a water-insol. carrier for removing LDLs from a body fluid is claimed. The use of above peptide as a reagent for binding LDLs is claimed. The peptides not only have an excellent ability to specifically bind LDLs but also are excellent in safety. Thereby they can be advantageously employed in reagents for LDL adsorbents, peptide drugs for diseases in which LDLs participate, and carrier peptides for drugs. Thus, H-WFWRK-NH2 (I) was prepared by the solid phase method using an automated peptide synthesizer (model 9050 plus, Japan Perceptive Limited) and a styrene-divinylbenzene copolymer containing 4-aminomethyl-3,5-dimethoxyphenoxymethyl group (Fmoc-PAL-PEG-PS resin, Japan Perceptive Limited). The peptide I in vitro showed 71.6% binding ratio to LDL vs. 10.5% for a comparison peptide H-QDGSDEVYK-OH (II). I immobilized on Sepharose in vitro showed 68.5% absorption ratio for LDL vs. 6.45 for II.

ST peptide prepn binding low density lipoprotein; LDL adsorbent peptide; drug carrier peptide

IT Peptides, preparation
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amides; preparation of peptides binding to low-d. lipoproteins)

IT **Lipoproteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
(low-d.; preparation of peptides binding to low-d. lipoproteins)

IT Peptides, preparation
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of peptides binding to low-d. lipoproteins)

IT Adsorbents
Drug delivery systems
(preparation of peptides binding to low-d. lipoproteins as adsorbents for low-d. lipoproteins and drug carriers)

IT 186538-55-6P 186538-56-7P 186538-57-8P 186538-58-9P 186538-59-0P
186538-74-9P 186538-75-0P 186538-76-1P 186538-77-2P 186538-78-3P
186538-79-4P 186538-80-7P 186538-81-8P 186538-82-9P 186538-83-0P
186538-84-1P 186538-85-2P 186538-86-3P 186538-87-4P 186538-92-1P
186538-93-2P 186539-05-9P 186539-06-0P 186539-07-1P 186539-08-2P
186539-10-6P 186539-15-1DP, Sepharose-bound 186539-15-1P
186539-16-2P **186539-17-3DP**, Sepharose-bound 186539-41-3P
186539-42-4P 186539-43-5P 186539-44-6P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(less active or inactive comparison peptide; preparation of peptides binding to low-d. lipoproteins)

IT 88831-09-8P 186538-50-1P 186538-51-2P 186538-52-3P 186538-53-4P
186538-54-5P 186538-60-3P 186538-61-4P 186538-62-5P 186538-63-6P
186538-64-7P 186538-65-8P 186538-66-9P 186538-67-0P 186538-68-1P
186538-69-2P 186538-70-5P 186538-71-6P 186538-72-7P 186538-73-8P
186538-88-5P 186538-89-6P 186538-90-9P 186538-91-0P 186538-94-3P
186538-95-4P 186538-96-5P 186538-97-6P 186538-98-7P 186538-99-8P
186539-00-4P 186539-01-5P 186539-02-6P 186539-03-7P 186539-04-8P
186539-12-8DP, Sepharose-bound 186539-12-8P 186539-14-0DP,
Sepharose-bound 186539-14-0P 186539-18-4P 186539-19-5P
186539-20-8P 186539-21-9P 186539-22-0P 186539-23-1P 186539-24-2P
186539-25-3P 186539-26-4P 186539-27-5P 186539-28-6P 186539-29-7P
186539-30-0P 186539-31-1P 186539-32-2P 186539-33-3P 186539-34-4P
186539-35-5P 186539-36-6P 186539-37-7P 186539-38-8P 186539-39-9P
186539-40-2P 186539-46-8P 186539-48-0P 186539-49-1P 186539-51-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of peptides binding to low-d. lipoproteins)

L59 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1993:467299 HCAPLUS
DN 119:67299
ED Entered STN: 21 Aug 1993
TI Lipoprotein assays using antibodies to a pan native epitope and recombinant antigens
IN Smith, Richard S.; Curtiss, Linda K.; Koduri, Kanaka Raju; Witztum, Joseph L.; Young, Stephen G.
PA Scripps Research Institute, USA
SO PCT Int. Appl., 137 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07H021-02
ICS C07K015-06; C12N015-70; G01N033-53
CC **9-10 (Biochemical Methods)**
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9307165	A1	19930415	WO 1992-US8634	19921009 <--
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE				
	US 5408038	A	19950418	US 1992-959946	19921008 <--
PRAI	US 1991-774633	A	19911009 <--		
	US 1992-901706	A	19920628 <--		
	US 1992-959946	A	19921008 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9307165	ICM	C07H021-02
	ICS	C07K015-06; C12N015-70; G01N033-53
US 5408038	ECLA	C07K014/775 <--

AB Methods and compns. are described for determining LDL in plasma. Native apolipoprotein B-100 (apo B-100) present in LDL particles is immunol. mimicked by a polypeptide of the invention. The polypeptide includes an amino acid sequence corresponding to a pan epitope region of the target apoprotein. A preferred polypeptide is a fusion protein that simultaneously mimics native apo B-100 and native apo A-I. Improved assay systems and methods for determining HDL and LDL levels in a body fluid sample are also described. Fragment sequences from apo B-100 and apo A-I are included. The monoclonal antibody (MAb) MB47 epitope of apo B-100 was mapped using apo B-100 fragment fusion proteins with β-galactosidase; cloning of apo B-100 fragment cDNA is described. Also described is the preparation of apo A-I/B-100 fusion proteins as further fusions with a β-galactosidase fragment. In an ELISA, Apo A-I/B-100 fusion protein showed reactivity with both MAb MB47 and anti-apo AI MAb AI-11; the fusion protein did not need to be solubilized (e.g. with a denaturing concentration of SDS) for use in the assay.

ST apolipoprotein B100 pan epitope immunoassay; AI B100 apolipoprotein fusion immunoassay; body fluid apolipoprotein B100 immunoassay; cloning cDNA apolipoprotein B100 fragment; sequence apolipoprotein B100 epitope fragment

IT Plasmid and Episome
("137", DNA for fusion protein of fragments of apolipoprotein B-100 and apolipoprotein A-I and β-galactosidase on)

IT Genetic vectors
(DNA for apolipoprotein B-100 fragment/apolipoprotein A-I fragment fusion protein on)

IT Body fluid
(apolipoprotein B-100 determination in, polypeptide for, pan native epitope in relation to)

IT Antigens
RL: ANST (Analytical study)
(epitopes, of apolipoprotein B-100, mapping of)

IT Deoxyribonucleic acid sequences
(for apolipoprotein B-100 fragments and apolipoprotein A-I fragments)

IT Molecular cloning
(of apolipoprotein B-100 cDNA, epitope mapping in relation to)

IT Protein sequences
(of apolipoprotein B-100 fragments and apolipoprotein A-I fragments)

IT **Lipoproteins**
RL: ANST (Analytical study)
(**apo-, A-I**, peptides derived from, recombinant fusion proteins with apolipoprotein B-100 fragments, LDL and HDL determination in relation to)

IT **Lipoproteins**
RL: ANST (Analytical study)
(**apo-, B-100**, pan epitope peptides derived from, LDL determination in relation to)

IT Proteins, specific or class
RL: SPN (Synthetic preparation); PREP (Preparation)
(fusion products, of apolipoprotein B-100 fragment and apolipoprotein A-I fragment, preparation of recombinant, LDL and HDL determination in relation to)

IT **Lipoproteins**
RL: ANT (Analyte); ANST (Analytical study)
(high-d., determination of, immunochem., apolipoprotein B-100 fragment/apolipoprotein A-I fragment fusion proteins for)

IT **Lipoproteins**

RL: ANT (Analyte); ANST (Analytical study)
(low-d., determination of, immunochem., apolipoprotein B-100 fragments and apolipoprotein B-100 fragment/apolipoprotein A-I fragment fusion proteins for)

IT Antibodies
RL: ANST (Analytical study)
(monoclonal, apolipoprotein B-100 fragments and B-100 fragment/A-I fragment fusion proteins reactivity with, immunoassay in relation to)

IT 148882-09-1
RL: ANST (Analytical study)
(monoclonal antibody reactivity with, epitope mapping and immunoassay in relation to)

IT 148711-36-8 148882-07-9
RL: PRP (Properties)
(nucleotide sequence of, apolipoprotein B-100 fragment/apolipoprotein A-I fragment fusion protein production in relation to)

IT 148882-04-6 148882-05-7 148882-06-8
RL: PRP (Properties)
(nucleotide sequence of, epitope mapping and fusion protein production in relation to)

IT 148846-70-2 148846-71-3 148846-72-4 148846-73-5 148846-74-6
148846-75-7 148846-76-8 148846-77-9 **148846-78-0**
RL: ANST (Analytical study)
(pan native epitope of, LDL immunochem. determination in relation to)

IT 9031-11-2DP, β-Galactosidase, fusion products with apolipoprotein B-100 fragments and apolipoprotein A-I fragments
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, apolipoprotein B-100 epitope mapping and immunoassay in relation to)

IT 148846-74-6DP, fusion products with β-galactosidase
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, apolipoprotein B-100 epitope mapping in relation to)

IT 148796-27-4DP, fusion products with apolipoprotein B-100 fragment
148882-08-0DP, fusion products with apolipoprotein B-100 fragment
RL: PREP (Preparation)
(production of, immunoassay for apolipoprotein B-100/apolipoprotein A-I in relation to)

L59 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
AN **1992:262521** HCAPLUS
DN **116:262521**
ED Entered STN: 27 Jun 1992
TI Method for preparing a lipoprotein modified by the incorporation of a lipophilic active substance
IN Favre, Gilles; Duriez, Patrick; Monard, Francoise; Medhi, Samadi Baboli; Soula, Georges; Fruchart, Jean Charles
PA Universite Droit et Sante Lille II, Fr.; Universite Paul Sabatier (Toulouse III)
SO PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DT Patent
LA French
IC ICM A61K047-42
ICS A61K007-48
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 9, 62
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9200761	A1	19920123	WO 1991-FR573	19910712 <--
W: AU, CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
FR 2664500	A1	19920117	FR 1990-8980	19900713 <--

FR 2664500	B1	19941028			
CA 2066416	AA	19920114	CA 1991-2066416	19910712	<--
AU 9182157	A1	19920204	AU 1991-82157	19910712	<--
AU 654144	B2	19941027			
EP 491921	A1	19920701	EP 1991-913037	19910712	<--
EP 491921	B1	19960207			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE					
JP 06500768	T2	19940127	JP 1991-512790	19910712	<--
JP 07086089	B4	19950920			
AT 133867	E	19960215	AT 1991-913037	19910712	<--
US 5324821	A	19940628	US 1992-838444	19920506	<--
PRAI FR 1990-8980	A	19900713	<--		
WO 1991-FR573	A	19910712	<--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
WO 9200761	ICM	A61K047-42	
	ICS	A61K007-48	
FR 2664500	ECLA	A61K007/00M4D; A61K009/127M	<--
US 5324821	ECLA	A61K008/14; A61K008/64; A61K009/127M; A61Q019/00	<--

AB A method is provided for preparation of a lipoprotein modified by the incorporation of ≥1 lipophilic substance (other than a triglyceride), e.g. a drug. The active substance is incorporated into an emulsion of a lipid phase in an aqueous continuous phase, an initial lipoprotein and ≥1 lipid transfer protein are added to the emulsion, the mixture is incubated, and the active substance-containing lipoprotein is isolated. The modified lipoproteins may be used in pharmaceutical or cosmetic compns. Mitoxantrone dilinolenate was incorporated into low-d. lipoprotein (LDL) using a com. lipid emulsion (Endolipid); lipoprotein-deficient serum was used as a source of transfer proteins. The modified LDL bound to apolipoprotein-B and -E receptors of HeLa cells as well as did native LDL. The decrease in plasma concentration of the modified LDL was close to that for native LDL. A modified LDL containing elliptinium oleate was more cytotoxic to L1210 cells than was elliptinium oleate added alone at the same concentration Formulations of modified LDLs are included.

ST lipoprotein carrier lipophilic substance; emulsion lipid lipoprotein modification; lipid transfer protein lipoprotein modification; LDL drug carrier; elliptinium oleate LDL carrier; mitoxantrone dilinolenate LDL carrier; neoplasm inhibitor lipoprotein carrier

IT Lipoproteins
RL: BIOL (Biological study)
(drug or other lipophilic active substance incorporation in)

IT Emulsifying agents
Liposome
Glycerides, biological studies
Lecithins
Phospholipids, biological studies
RL: BIOL (Biological study)
(emulsion containing, in lipophilic active substance incorporation into lipoprotein)

IT Emulsions
(in lipophilic active substance incorporation into lipoprotein)

IT Lipids, biological studies
RL: PREP (Preparation)
(in preparation of low-d. lipoprotein with incorporated antineoplastic agent)

IT Cell proliferation
(inhibitors of, lipoprotein with incorporated)

IT Bactericides, Disinfectants, and Antiseptics
Fungicides and Fungistats
Neoplasm inhibitors
Parasiticides

Virucides and Virustats
Vitamins
RL: BIOL (Biological study)
(lipoprotein with incorporated)

IT Blood serum
(lipoprotein-deficient, as source of lipid transfer proteins in lipophilic active substance incorporation into lipoprotein)

IT Reticuloendothelial system
(modified low-d. lipoprotein with incorporated lipophilic active substance recognition by)

IT Pharmaceutical dosage forms
(of lipoproteins with incorporated lipophilic active substances)

IT **Lipoproteins**
RL: BIOL (Biological study)
(**apo-, B**, receptors, low-d. lipoprotein with incorporated mitoxantrone dilinolenate binding to)

IT **Lipoproteins**
RL: BIOL (Biological study)
(**apo-, E**, receptors, low-d. lipoprotein with incorporated mitoxantrone dilinolenate binding to)

IT **Receptors**
RL: BIOL (Biological study)
(**apolipoprotein B, low-d. lipoprotein** with incorporated mitoxantrone dilinolenate binding to)

IT **Receptors**
RL: BIOL (Biological study)
(**apolipoprotein E, low-d. lipoprotein** with incorporated mitoxantrone dilinolenate binding to)

IT **Proteins, specific or class**
RL: BIOL (Biological study)
(lipid-exchanging, in lipophilic active substance incorporation into lipoprotein)

IT **Proteins, specific or class**
RL: BIOL (Biological study)
(lipid-transporting, in lipophilic active substance incorporation into lipoprotein)

IT Lipoproteins
RL: BIOL (Biological study)
(low-d., drug or other lipophilic active substance incorporation in)

IT Lipoproteins
RL: BIOL (Biological study)
(low-d., acetoacetyl, drug or other lipophilic active substance incorporation in)

IT Lipoproteins
RL: BIOL (Biological study)
(low-d., acetylated, drug or other lipophilic active substance incorporation in)

IT Lipoproteins
RL: BIOL (Biological study)
(low-d., lactose-containing, drug or other lipophilic active substance incorporation in)

IT Lipoproteins
RL: BIOL (Biological study)
(low-d., oxidized, drug or other lipophilic active substance incorporation in)

IT 57-88-5D, Cholesterol, esters
RL: BIOL (Biological study)
(emulsion containing, in lipophilic active substance incorporation into lipoprotein)

IT 58337-35-2, Elliptinium 58337-35-2D, Elliptinium, derivs. 58337-35-2D, Elliptinium, fatty acid esters 64862-96-0, Ametantrone 64862-96-0D,

Ametantrone, derivs. 64862-96-0D, Ametantrone, fatty acid esters
65271-80-9, Mitoxantrone 65271-80-9D, Mitoxantrone, derivs.
65271-80-9D, Mitoxantrone, fatty acid esters
RL: BIOL (Biological study)
(lipoprotein with incorporated)
IT 141098-56-8 141098-57-9 141098-58-0 141140-79-6 141140-80-9
141140-81-0 141140-82-1 141140-83-2 141140-84-3 141140-85-4
141140-86-5 141699-44-7
RL: BIOL (Biological study)
(low-d. lipoprotein with incorporated)

L59 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1992:3218 HCAPLUS
DN 116:3218
ED Entered STN: 11 Jan 1992
TI Polyamide resin and method for preparation of reagents for immunodiagnostic or immunization use
IN Sparrow, James T.; Kanda, Patrick; Kennedy, Ronald C.
PA Southwest Foundation for Biomedical Research, USA; Baylor College of Medicine
SO U.S., 13 pp. Cont.-in-part of U.S. Ser. No. 858,216, abandoned.
CODEN: USXXAM
DT Patent
LA English
IC ICM C08F020-54
NCL 526303100
CC **9-14 (Biochemical Methods)**
Section cross-reference(s): 15, 34, 35
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4973638	A	19901127	US 1989-368708	19890619 <--
	EP 265501	A1	19880504	EP 1987-903178	19870429 <--
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	CA 1339670	A1	19980210	CA 1987-535982	19870429 <--
	US 5126399	A	19920630	US 1989-368713	19890620 <--
	US 5084509	A	19920128	US 1990-614857	19901116 <--
PRAI	US 1986-858216	B2	19860430 <--		
	US 1989-368708	A2	19890619 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4973638	ICM	C08F020-54
	NCL	526303100

AB A polyamide resin is prepared by mixing a dimethylacrylamide monomer with an N-acrylyl-diaminoalkane functional monomer in an aqueous solution together with a crosslinker and emulsifying the aqueous solution in an organic solvent. An initiator and a promoter are added to polymerize the N-acrylyl-diaminoalkane functional monomer, dimethylacrylamide monomer, and crosslinker in the form of beads. The pH of the mixture is controlled during the polymerization The beads are used as a solid phase for peptide and protein synthesis according to methods known in the art. The conjugate of the polyamide resin and the synthesized peptide or protein is used directly for immunoassays or immunization without the need for separation of the peptide or protein from the resin and subsequent purification An aminohexyl resin was prepared from dimethylacrylamide, N,N-bisacryloyl-1,2-diaminopropane, and N-acryloyl-1,6-diaminohexane.HCl; Boc-glycyl-4-(oxymethyl)benzoic acid (preparation given) was coupled to the resin; and hepatitis B surface antigen (HBsAg) peptide 119-159, with serine substitutions for cysteines at positions 121, 138, and 149 and with 2 disulfides (cysteines 124 and 137, 139 and 147), was synthesized on the resin. The resin-bound peptide was used in immunoassays for antibodies to

HbsAg in human serum. Rabbits immunized with the conjugate yielded anti-peptide antisera which cross reacted with HBsAg.

ST polyamide resin protein synthesis; vaccine polyamide resin bound peptide; immunoassay polyamide carrier

IT Immunoassay
(antibodies determination by, polyamide-bound synthetic peptides for)

IT Blood analysis
(antibodies to hepatitis B virus surface antigen determination in, polyamide-bound synthetic peptide for)

IT Vaccines
(polyamide-bound synthetic peptides in)

IT Polyamides, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, for protein synthesis for immunoassays and immunization)

IT Peptides, preparation
Proteins, preparation
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of, on polyamide resin for immunoassay reagent and vaccine)

IT Antibodies
RL: ANST (Analytical study)
(to polyamide-bound synthetic peptides)

IT Glycoproteins, specific or class
RL: ANST (Analytical study)
(gp41, of human immunodeficiency virus, synthesis of peptide of, on polyamide resin for immunoassay reagent and vaccine)

IT Antigens
RL: ANST (Analytical study)
(hepatitis B surface, antibodies to, determination of, by immunoassay, polyamide-bound synthetic peptide for)

IT Virus, animal
(human immunodeficiency 1, envelope glycoprotein gp120 of, synthesis of peptide of, on polyamide resin for immunoassay reagent and vaccine)

IT 65-85-0D, Benzoic acid, oxyalkyl derivs.
RL: ANST (Analytical study)
(as linker on polyamide resin for protein synthesis for immunoassays and immunization)

IT 74746-64-8D, reaction products with polyamides 135467-06-0D, reaction products with polyamides 135467-07-1D, reaction products with polyamides **135467-08-2D**, reaction products with polyamides 135467-09-3D, reaction products with polyamides 135467-10-6D, reaction products with polyamides 135467-11-7D, reaction products with polyamides **135467-12-8D**, reaction products with polyamides
RL: ANST (Analytical study)
(immunization with, antibody response to)

IT 86123-08-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, in preparation of linker for polyamide resin)

IT 134966-29-3DP, reaction products with glycyl(oxymethyl)benzoic acid 135265-91-7DP, reaction products with glycyl(oxymethyl)benzoic acid
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of and peptides synthesis on, for immunoassays)

IT 86123-09-3DP, reaction products with polyamide resins
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of and peptides synthesis on, for immunoassays and immunization)

IT 86123-09-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as linker on polyamide resin for protein synthesis for immunoassays and immunization)

IT 106769-45-3DP, reaction products with polyamides 118529-95-6DP, reaction products with polyamides
RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of, for immunoassays and vaccines)
IT 106636-82-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, in preparation of polyamide resin for protein synthesis for immunoassays and immunization)
IT 4530-20-5 6232-88-8, 4-(Bromomethyl)benzoic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in preparation of linker for polyamide resin)
IT 107-11-9, Allylamine 53298-29-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in preparation of polyamide resin for protein synthesis for immunoassays and immunization)

L59 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1987:45907 HCAPLUS
DN 106:45907
ED Entered STN: 21 Feb 1987
TI Complete protein sequence and identification of structural domains of human apolipoprotein B
AU Knott, T. J.; Pease, R. J.; Powell, L. M.; Wallis, S. C.; Rall, S. C.; Innerarity, T. L.; Blackhart, B.; Taylor, W. H.; Marcel, Y.; et al.
CS Mol. Med. Res. Group, MRC Clin. Res. Cent., Harrow, HA1 3UJ, UK
SO Nature (London, United Kingdom) (**1986**), 323(6090), 734-8
CODEN: NATUAS; ISSN: 0028-0836
DT Journal
LA English
CC 6-3 (General Biochemistry)
Section cross-reference(s): 3
AB The complete 4563-amino acid sequence of human apo B-100 precursor (relative mol. mass 514,000) was determined from cDNA clones. Numerous lipid-binding structures are distributed throughout the extraordinary length of apo B-100 and must underlie its special function as a nucleus for lipoprotein assembly and maintenance of plasma lipoprotein integrity. A domain enriched in basic amino acid residues was identified as important for the cellular uptake of cholesterol by the low-d. lipoprotein receptor pathway.
ST apolipoprotein B100 sequence domain; lipid domain apolipoprotein B100
IT Lipids, biological studies
RL: BIOL (Biological study)
(apolipoprotein B-100 of human binding sites for, structural properties of,)
IT **Receptors**
RL: BIOL (Biological study)
(for **low-d. lipoprotein**, of human, **apolipoprotein B**-100 binding domain for)
IT Glycosidation
(of apolipoprotein B-100 of human, sites for)
IT Protein sequences
(of apolipoprotein B-100 precursor, of human, complete)
IT Protein sequences
(of apolipoprotein B-100, of human, complete)
IT **Lipoproteins**
RL: PRP (Properties)
(**apo-**, **B-100**, amino acid sequence and structural domains of, of human)
IT **105733-52-6 105733-53-7**
RL: PRP (Properties)
(amino acid sequence of, gene-derived)
IT **57-88-5**, Cholesterol, biological studies
RL: BIOL (Biological study)
(apolipoprotein B-100 of human binding of, domain for)

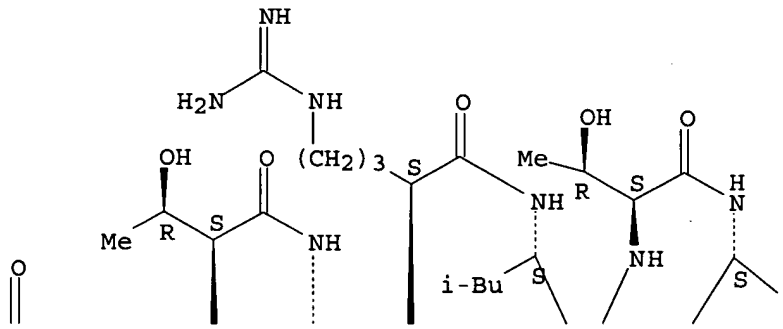
```
=> fil reg
FILE 'REGISTRY' ENTERED AT 12:46:50 ON 26 JAN 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   24 JAN 2005  HIGHEST RN 819792-06-8
DICTIONARY FILE UPDATES:  24 JAN 2005  HIGHEST RN 819792-06-8

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html


=> d his l60-

     (FILE 'HCAPLUS' ENTERED AT 12:46:39 ON 26 JAN 2005)

     FILE 'REGISTRY' ENTERED AT 12:46:50 ON 26 JAN 2005

     FILE 'HCAPLUS' ENTERED AT 12:47:00 ON 26 JAN 2005
               SEL HIT RN L59

     FILE 'REGISTRY' ENTERED AT 12:47:07 ON 26 JAN 2005
L60           54 S E7-E60
L61           21 S L60 AND L1

=> d l61 sqide can tot

L61  ANSWER 1 OF 21  REGISTRY  COPYRIGHT 2005 ACS on STN
RN   798567-08-5  REGISTRY
CN   L-Phenylalanine, L-lysyl-L-leucyl-L-α-glutamylglycyl-L-threonyl-L-
     threonyl-L-arginyl-L-leucyl-L-threonyl-L-arginyl-L-lysyl-L-arginylglycyl-L-
     leucyl-L-lysyl-L-leucyl-L-alanyl-L-threonyl-L-alanyl-L-leucyl-L-seryl-L-
     leucyl-L-phenylalanyl-L-leucyl- (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   9: PN: US20040235730 SEQID: 9 unclaimed sequence
FS   PROTEIN SEQUENCE; STEREOSEARCH
SQL  25

PATENT ANNOTATIONS (PNTE):
Sequence |Patent
Source   |Reference
=========+============
Not Given|US2004235730
         |unclaimed
         |SEQID 9


SEQ      1 KLEGTTRLTR KRGLKLATAL SLFLF
           ====== =====
```

Hit sequences from references 1-11, set L59

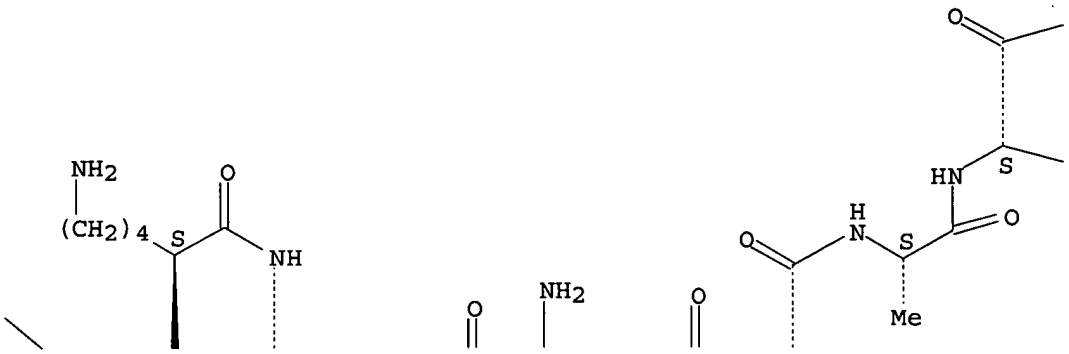
HITS AT: 5-15
MF C130 H225 N37 O33
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PRP (Properties)

Absolute stereochemistry.

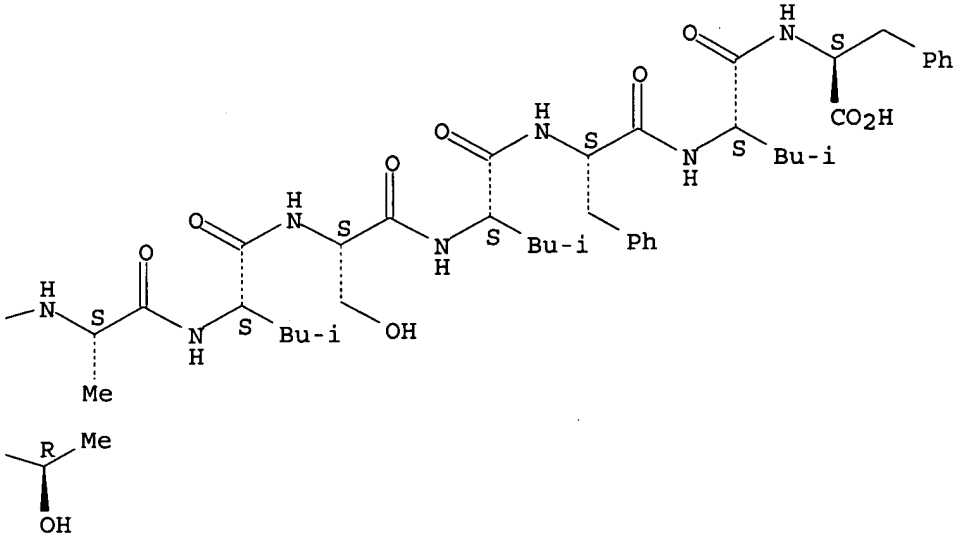
PAGE 1-A



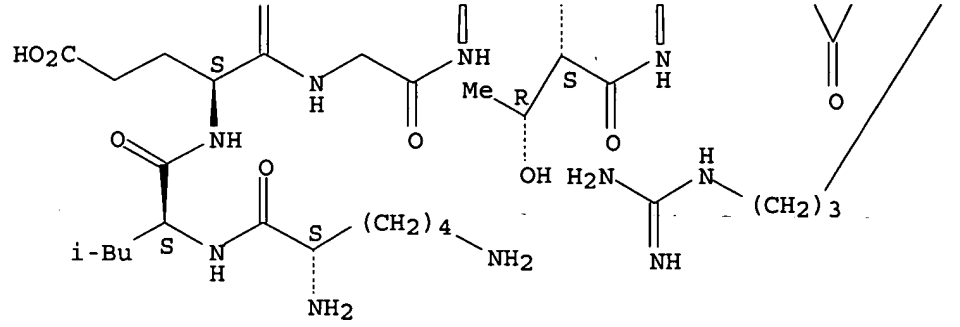
PAGE 1-B



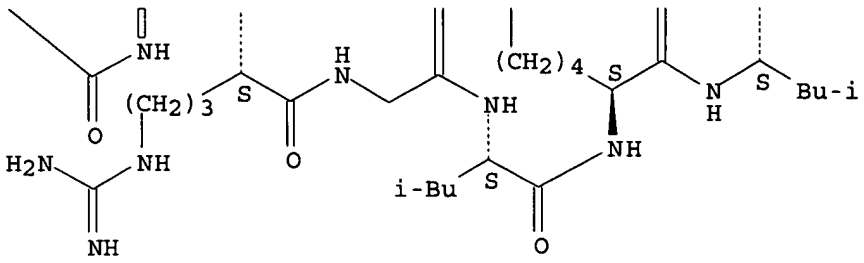
PAGE 1-C



PAGE 2-A



PAGE 2-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 142:2504

L61 ANSWER 2 OF 21 REGISTRY COPYRIGHT 2005 ACS on STN
RN **798567-07-4** REGISTRY
CN L-Serine, L-tyrosyl-L-lysyl-L-leucyl-L-glutaminylglycyl-L-threonyl-L-threonyl-L-arginyl-L-leucyl-L-threonyl-L-arginyl-L-lysyl-L-arginylglycyl-L-leucyl-L-lysyl-L-leucyl-L-alanyl-L-threonyl-L-alanyl-L-leucyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 5: PN: US20040235730 SEQID: 5 unclaimed sequence
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 22

PATENT ANNOTATIONS (PNTE):

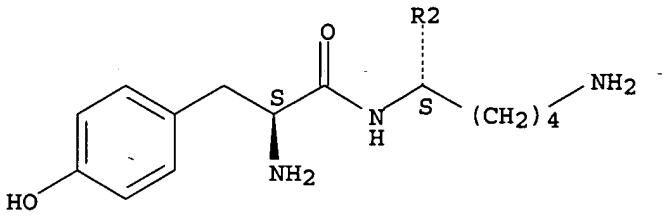
Sequence Source	Patent Reference
Not Given	US2004235730 unclaimed SEQID 5

SEQ 1 YKLQGTTRLT RKRGLKLATA LS
===== ======
HITS AT: 6-16
MF C109 H195 N35 O30
SR CA

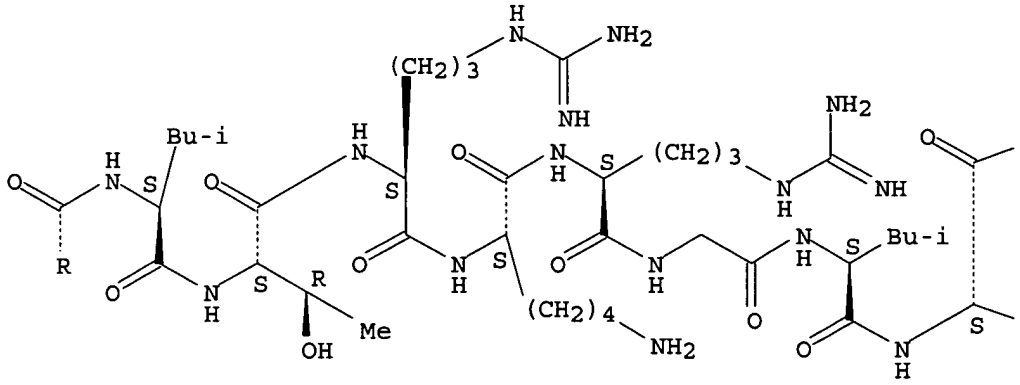
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PRP (Properties)

Absolute stereochemistry.

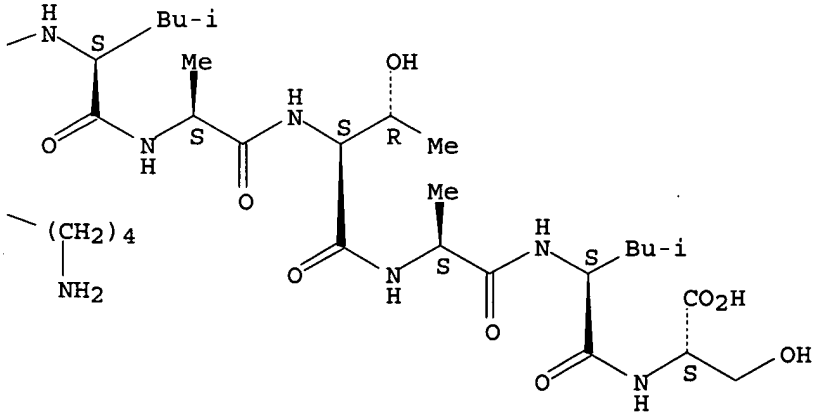
PAGE 1-A



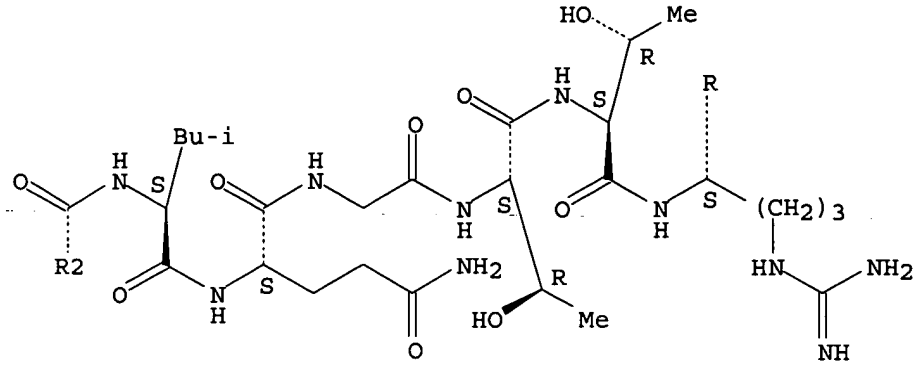
PAGE 2-A



PAGE 2-B



PAGE 3-A



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 142:2504

L61 ANSWER 3 OF 21 REGISTRY COPYRIGHT 2005 ACS on STN
RN **412944-03-7** REGISTRY
CN L-Serine, N-[(2E,4E,6E,8E)-3,7-dimethyl-1-oxo-9-(2,6,6-trimethyl-1-cyclohexen-1-yl)-2,4,6,8-nonatetraenyl]-L-tyrosyl-L-lysyl-L-leucyl-L-α-glutamylglycyl-L-threonyl-L-threonyl-L-arginyl-L-leucyl-L-threonyl-L-arginyl-L-lysyl-L-arginylglycyl-L-leucyl-L-lysyl-L-leucyl-L-alanyl-L-threonyl-L-alanyl-L-leucyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 22
NTE modified (modifications unspecified)

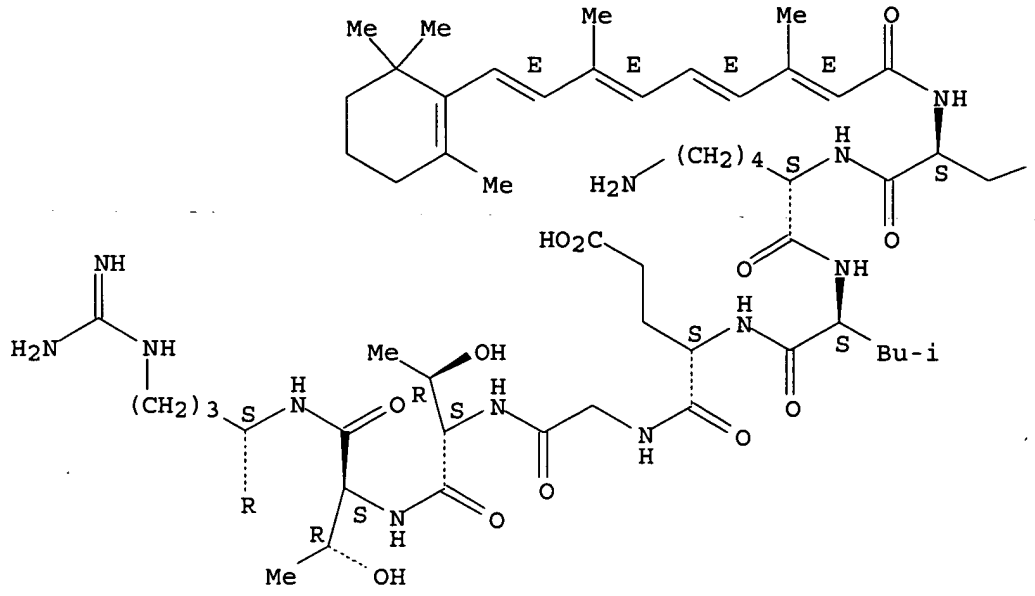
type	location	description
modification	Tyr-1 -	undetermined modification

SEQ 1 YKLEGTTRLT RKRGLKLATA LS
HITS AT: 6-16

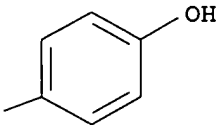
RELATED SEQUENCES AVAILABLE WITH SEQLINK
MF C129 H220 N34 O32
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: BIOL (Biological study)

Absolute stereochemistry.
Double bond geometry as shown.

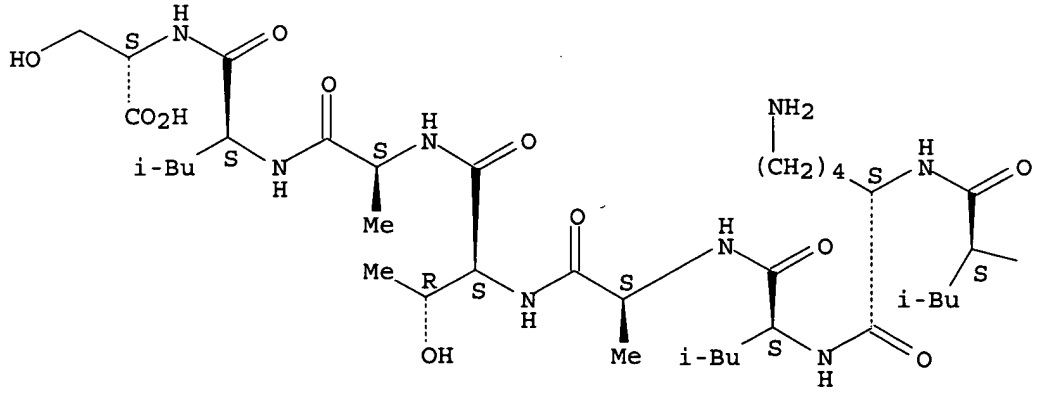
PAGE 1-A



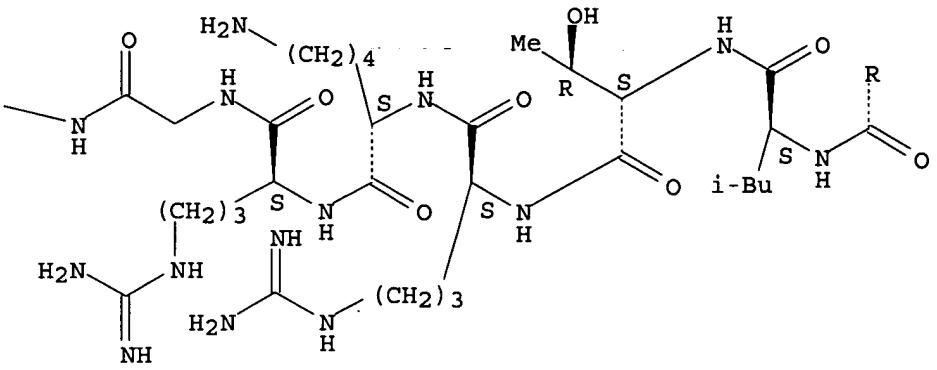
PAGE 1-B



PAGE 2-A



PAGE 2-B



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:322611

L61 ANSWER 4 OF 21 REGISTRY COPYRIGHT 2005 ACS on STN
RN **412944-02-6** REGISTRY
CN L-Serine, N-(15-oxoretin-15-yl)-L-tyrosyl-L-lysyl-L-leucyl-L-α-glutamylglycyl-L-threonyl-L-threonyl-L-arginyl-L-leucyl-L-threonyl-L-arginyl-L-lysyl-L-arginylglycyl-L-leucyl-L-lysyl-L-leucyl-L-alanyl-L-threonyl-L-alanyl-L-leucyl-, 22-(3β)-cholest-5-en-3-yl ester (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 22
NTE modified (modifications unspecified)

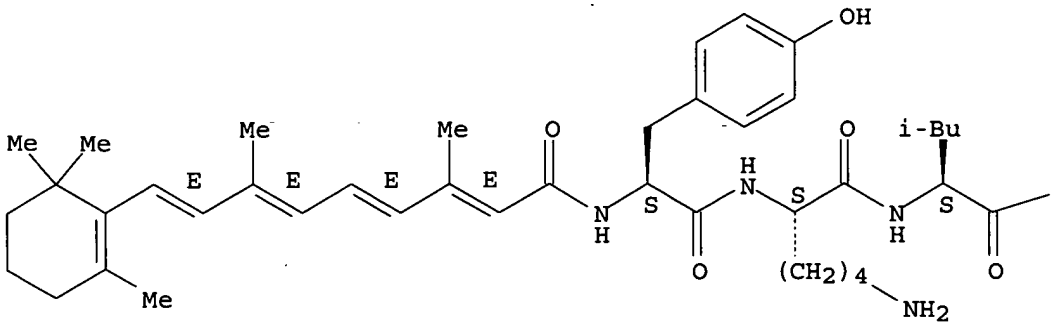
type	------ location ------	description
modification	Tyr-1 -	undetermined modification

SEQ 1 YKLEGTTRLT RKRGLKLATA LS
===== ======
HITS AT: 6-16

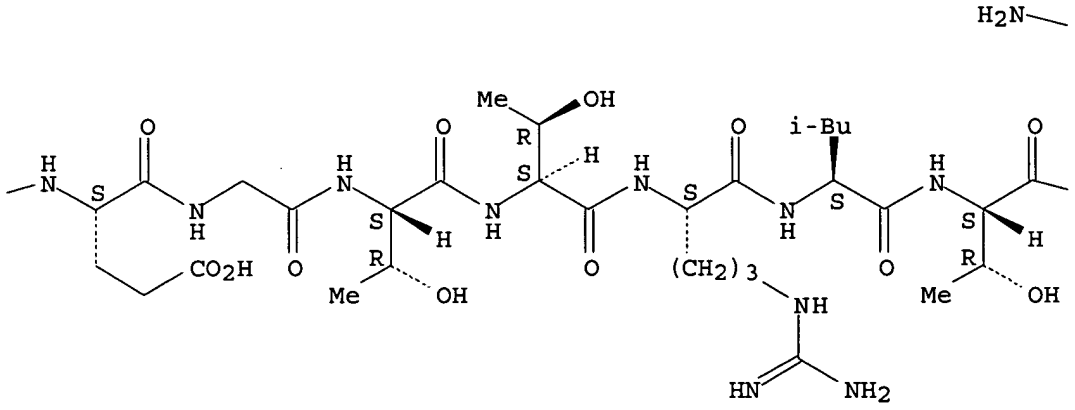
RELATED SEQUENCES AVAILABLE WITH SEQLINK
MF C156 H264 N34 O32
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: BIOL (Biological study); PRP (Properties); USES (Uses)

Absolute stereochemistry.
Double bond geometry as shown.

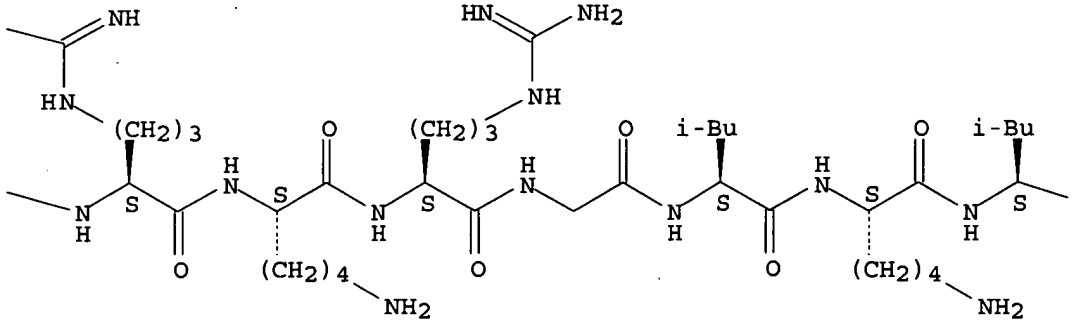
PAGE 1-A



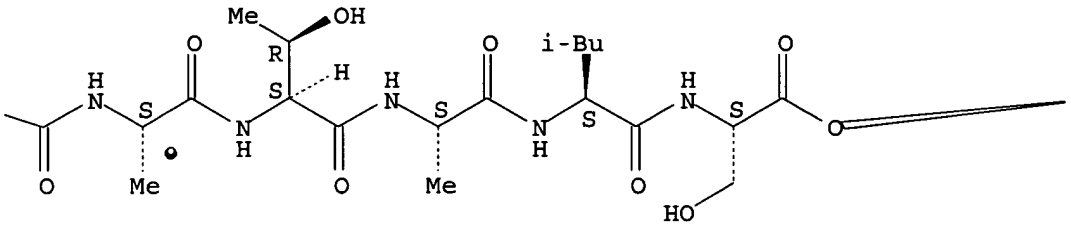
PAGE 1-B



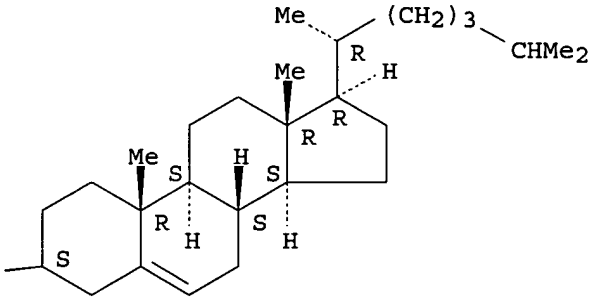
PAGE 1-C



PAGE 1-D



PAGE 1-E



2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:67994

REFERENCE 2: 136:322611

L61 ANSWER 5 OF 21 REGISTRY COPYRIGHT 2005 ACS on STN
RN **412944-01-5** REGISTRY
CN L-Leucine, N-[(2E,4E,6E,8E)-3,7-dimethyl-1-oxo-9-(2,6,6-trimethyl-1-cyclohexen-1-yl)-2,4,6,8-nonatetraenyl]glycyl-L-threonyl-L-threonyl-L-arginyl-L-leucyl-L-threonyl-L-arginyl-L-lysyl-L-arginylglycyl-L-leucyl-L-lysyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 13
NTE modified (modifications unspecified)

type	------ location ------	description
modification	Gly-1 -	undetermined modification

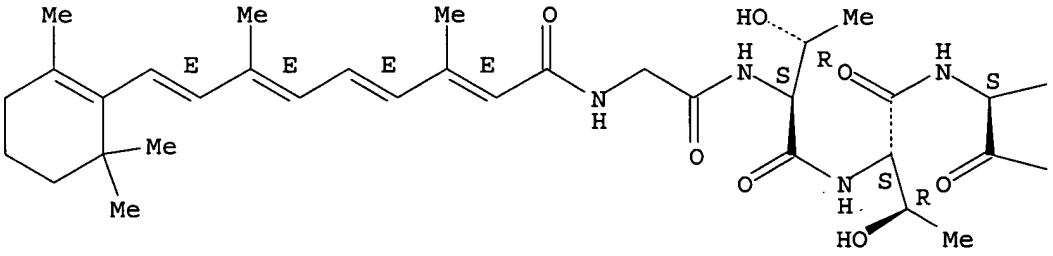
SEQ 1 GTTRLTRKRG LKL
========= ==

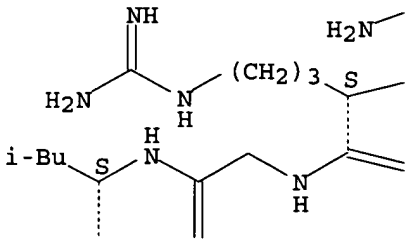
HITS AT: 2-12

RELATED SEQUENCES AVAILABLE WITH SEQLINK
MF C84 H148 N24 O18
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: BIOL (Biological study); PRP (Properties); USES (Uses)

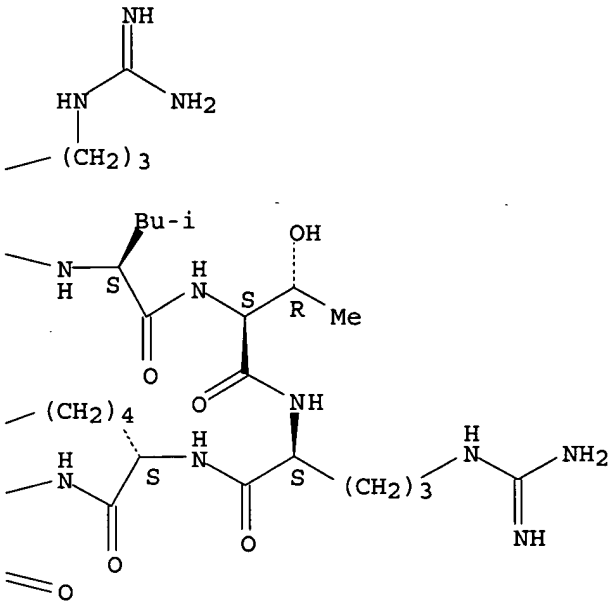
Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A

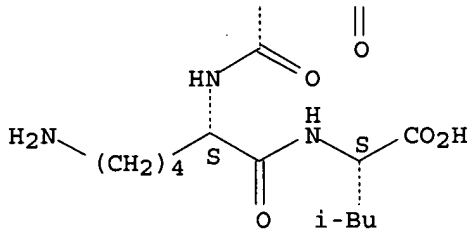




PAGE 1-B



PAGE 2-A



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:67994

REFERENCE 2: 136:322611

L61 ANSWER 6 OF 21 REGISTRY COPYRIGHT 2005 ACS on STN
RN **412944-00-4** REGISTRY
CN L-Leucine, N-[(2E,4E,6E,8E)-3,7-dimethyl-1-oxo-9-(2,6,6-trimethyl-1-cyclohexen-1-yl)-2,4,6,8-nonatetraenyl]-L-leucyl-L-arginyl-L-leucyl-L-threonyl-L-arginyl-L-lysyl-L-arginylglycyl-L-leucyl-L-lysyl-, (3β)-cholest-5-en-3-yl ester (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 11
NTE modified (modifications unspecified)

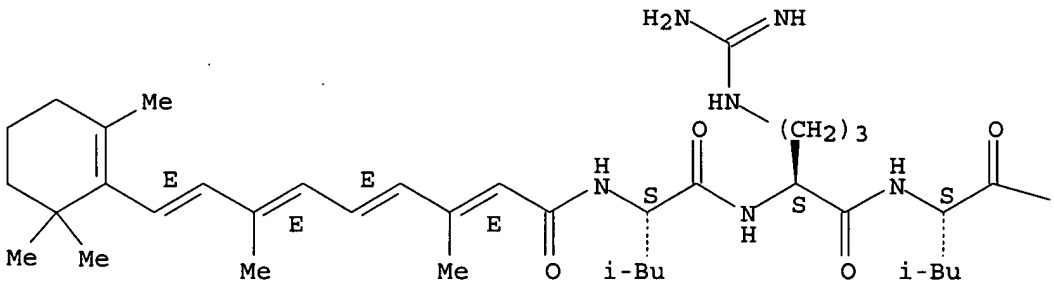
type	------ location ------	description
modification	Leu-1 -	undetermined modification

SEQ 1 LRLTRKRGLK L
=========
HITS AT: 2-10

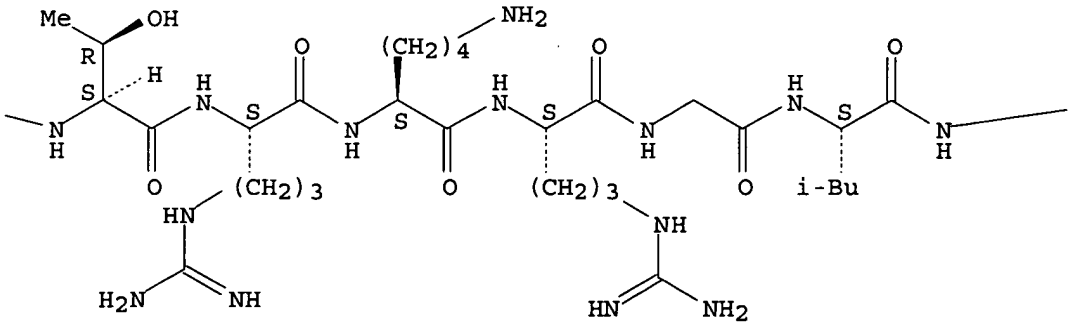
RELATED SEQUENCES AVAILABLE WITH SEQLINK
MF C107 H186 N22 O14
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: BIOL (Biological study); PRP (Properties); USES (Uses)

Absolute stereochemistry.
Double bond geometry as shown.

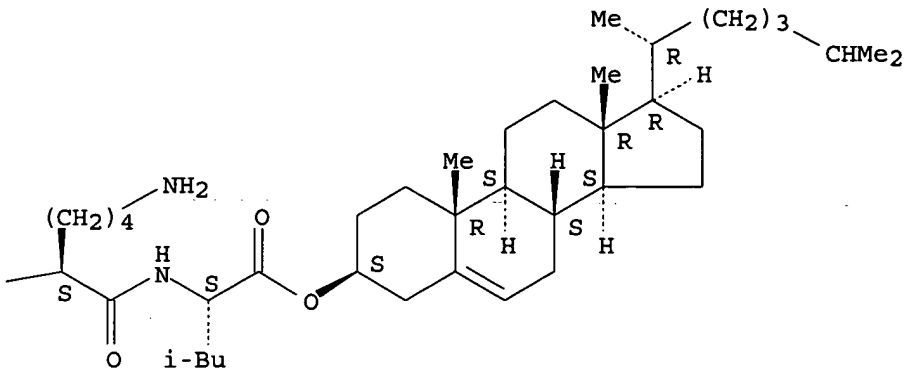
PAGE 1-A



PAGE 1-B



PAGE 1-C



2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:67994

REFERENCE 2: 136:322611

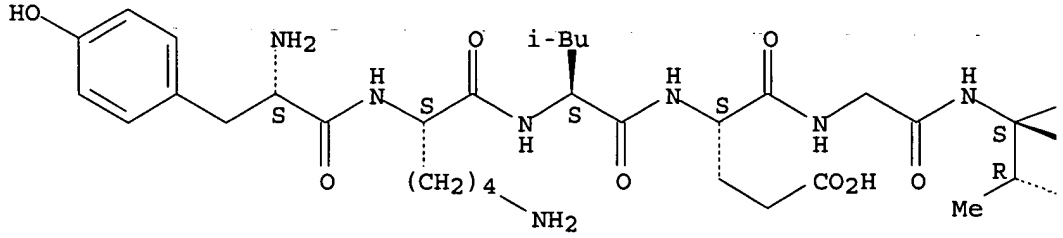
L61 ANSWER 7 OF 21 REGISTRY COPYRIGHT 2005 ACS on STN
RN **205648-02-8** REGISTRY
CN L-Serine, L-tyrosyl-L-lysyl-L-leucyl-L-α-glutamylglycyl-L-threonyl-L-threonyl-L-arginyl-L-leucyl-L-threonyl-L-arginyl-L-lysyl-L-arginylglycyl-L-leucyl-L-lysyl-L-leucyl-L-alanyl-L-threonyl-L-alanyl-L-leucyl-, 22-(3β)-cholest-5-en-3-yl ester (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 22
NTE modified (modifications unspecified)

SEQ 1 YKLEGTTRLT RKRGLKLATA LS
===== ======
HITS AT: 6-16

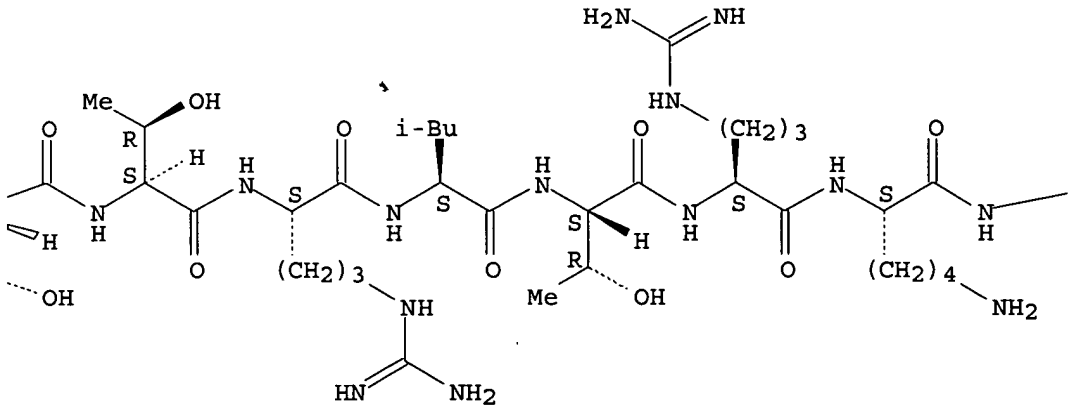
RELATED SEQUENCES AVAILABLE WITH SEQLINK
MF C136 H238 N34 O31
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Patent
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); PROC (Process); USES (Uses)

Absolute stereochemistry.

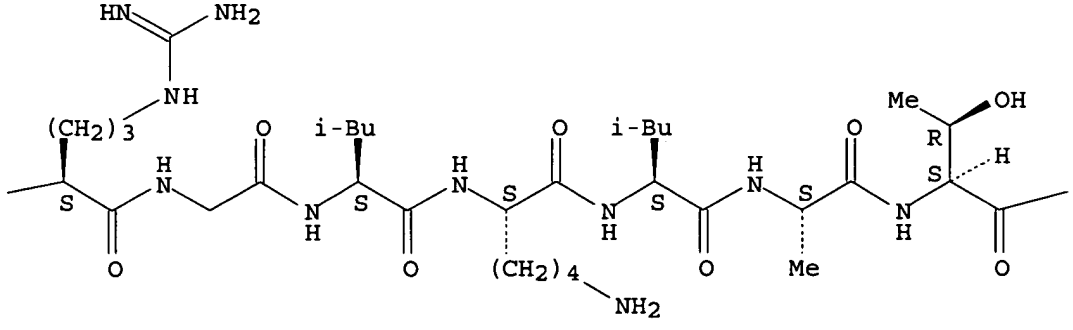
PAGE 1-A



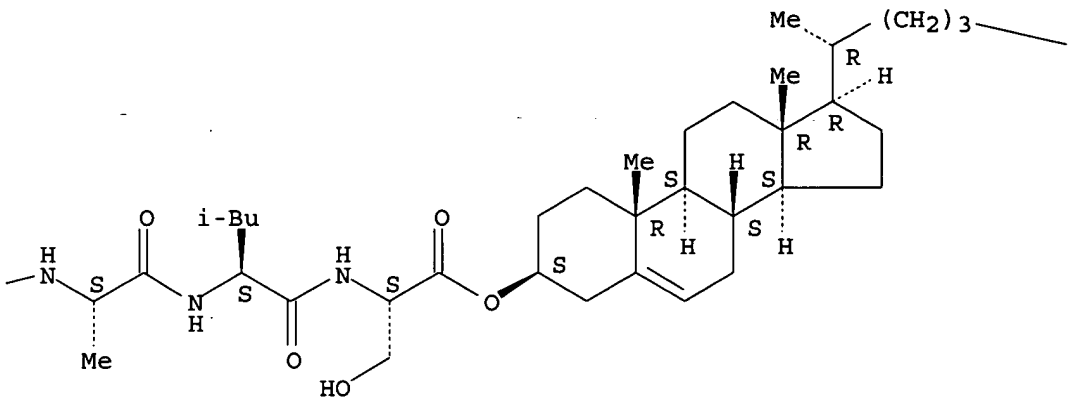
PAGE 1-B



PAGE 1-C



PAGE 1-D



PAGE 1-E

—CHMe2

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 128:275115

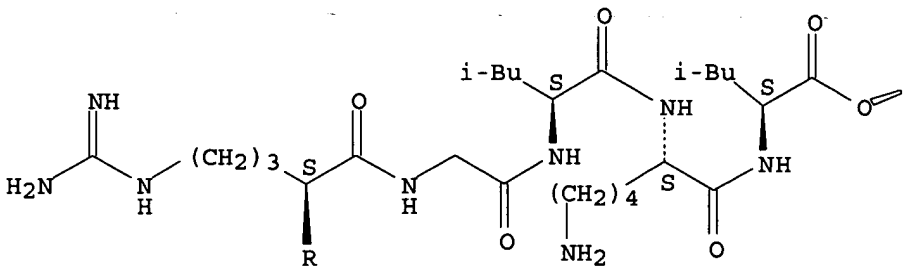
L61 ANSWER 8 OF 21 REGISTRY COPYRIGHT 2005 ACS on STN
RN **205648-01-7** REGISTRY
CN L-Leucine, L-leucyl-L-arginyl-L-leucyl-L-threonyl-L-arginyl-L-lysyl-L-arginylglycyl-L-leucyl-L-lysyl-, (3β)-cholest-5-en-3-yl ester (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 11
NTE modified (modifications unspecified)

SEQ 1 LRLTRKRGLK L
=========
HITS AT: 2-10

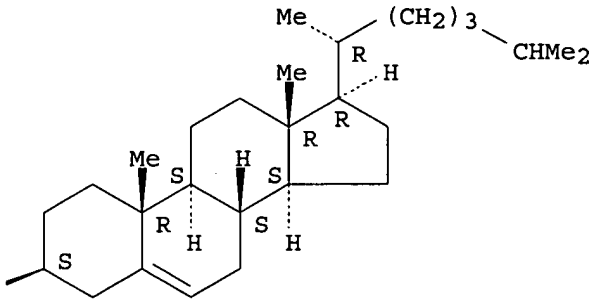
RELATED SEQUENCES AVAILABLE WITH SEQLINK
MF C87 H160 N22 O13
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Patent
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); PROC (Process); USES (Uses)

Absolute stereochemistry.

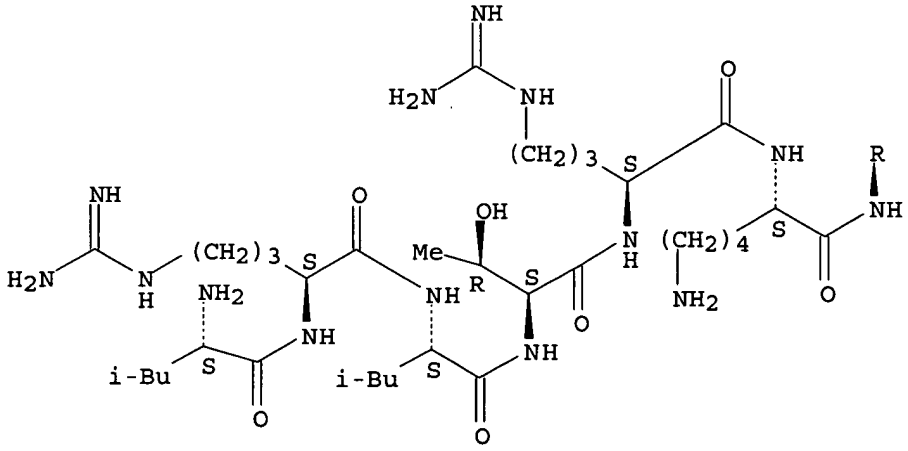
PAGE 1-A



PAGE 1-B



PAGE 2-A



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 128:275115

L61 ANSWER 9 OF 21 REGISTRY COPYRIGHT 2005 ACS on STN
RN **205648-00-6** REGISTRY
CN L-Lysine, L-threonyl-L-threonyl-L-arginyl-L-leucyl-L-threonyl-L-arginyl-L-lysyl-L-arginylglycyl-L-leucyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 2: PN: US20040235730 SEQID: 2 claimed sequence
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 11

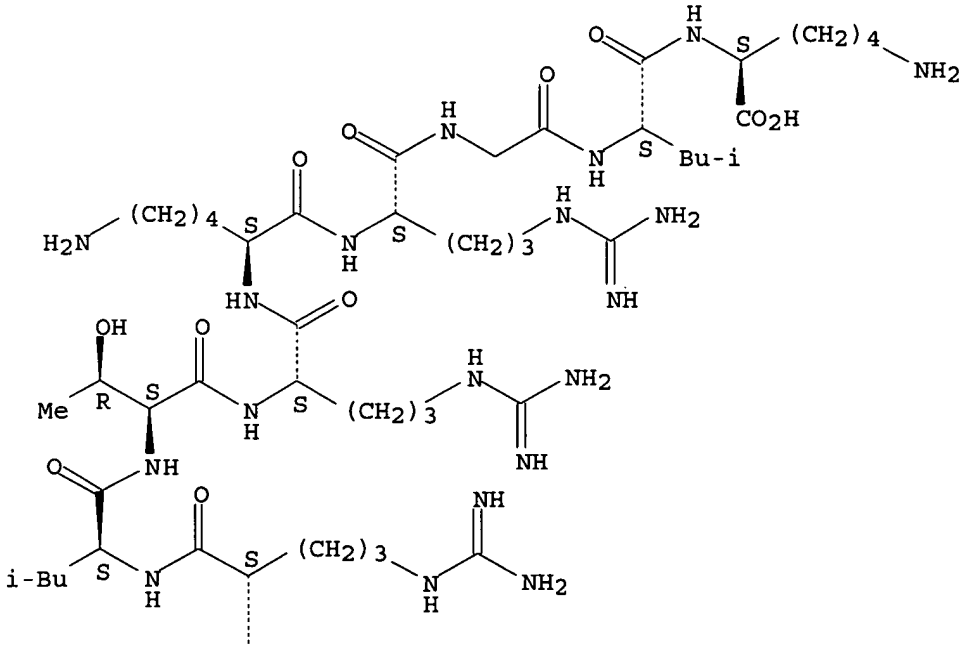
PATENT ANNOTATIONS (PNTE):

Sequence Source	Patent Reference
Not Given	US2004235730 claimed SEQID 2

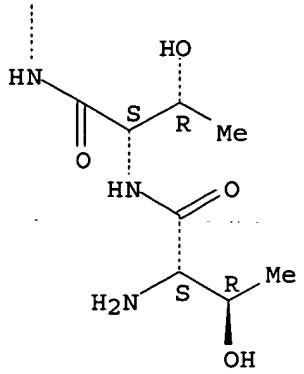
SEQ 1 TTRLTRKRGL K
========== =
HITS AT: 1-11
MF C56 H108 N22 O15
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PROC (Process); PRP (Properties); USES (Uses)
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); PROC (Process); USES (Uses)

Absolute stereochemistry.

PAGE 1-A



PAGE 2-A



2 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 142:2504

REFERENCE 2: 128:275115

L61 ANSWER 10 OF 21 REGISTRY COPYRIGHT 2005 ACS on STN
RN **205647-99-0** REGISTRY
CN L-Histidine, L-lysyl-L-alanyl-L-α-glutamyl-L-tyrosyl-L-lysyl-L-lysyl-L-asparaginyl-L-lysyl-L-histidyl-L-arginyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1: PN: US20040235730 SEQID: 1 claimed sequence
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 11

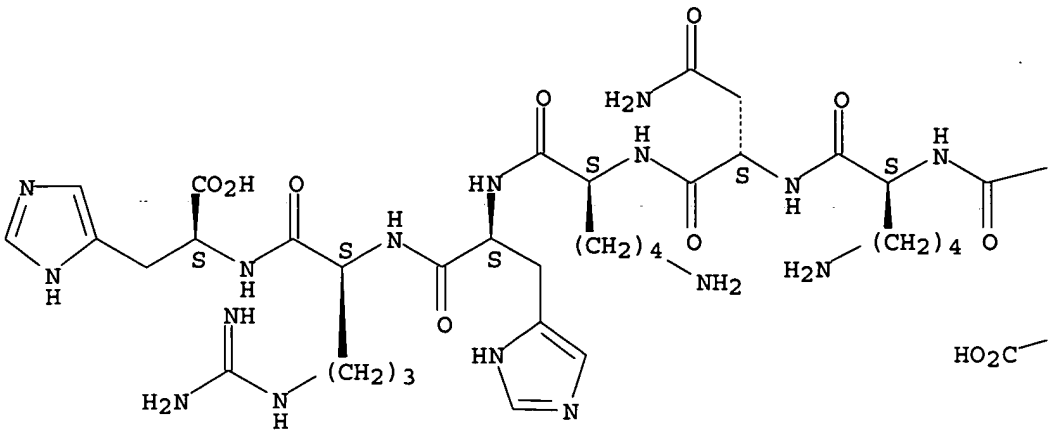
PATENT ANNOTATIONS (PNTE):

Sequence Source	Patent Reference
Not Given	US2004235730 claimed SEQID 1

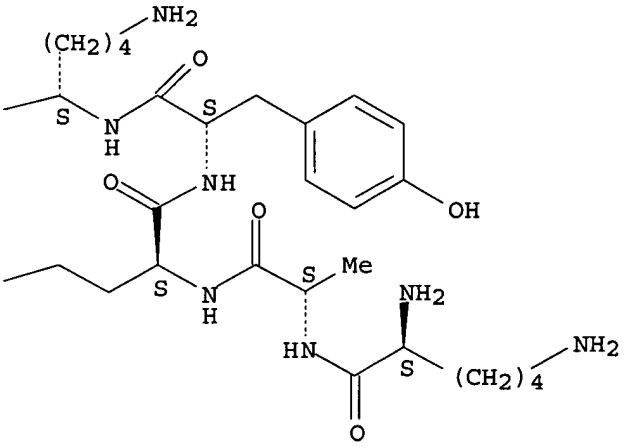
SEQ 1 KAEYKKNKHR H
========== =
HITS AT: 1-11
MF C63 H103 N23 O16
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PROC (Process); PRP (Properties); USES (Uses)
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); PROC (Process); USES (Uses)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



2 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 142:2504

REFERENCE 2: 128:275115

L61 ANSWER 11 OF 21 REGISTRY COPYRIGHT 2005 ACS on STN
RN **192937-46-5** REGISTRY
CN L-Serine, L-tyrosyl-L-lysyl-L-leucyl-L-α-glutamylglycyl-L-threonyl-L-threonyl-L-arginyl-L-leucyl-L-threonyl-L-arginyl-L-lysyl-L-arginylglycyl-L-leucyl-L-lysyl-L-leucyl-L-alanyl-L-threonyl-L-alanyl-L-leucyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 6: PN: US20040235730 SEQID: 6 unclaimed sequence
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 22

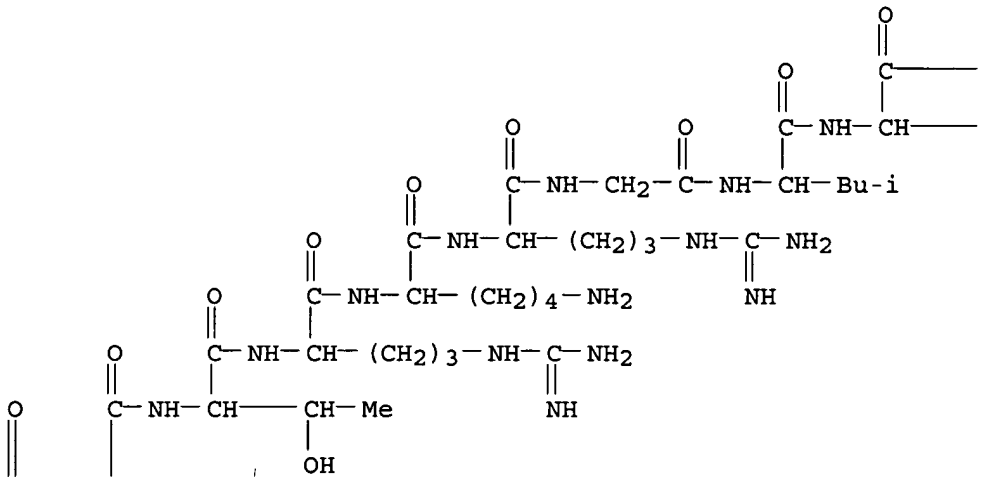
PATENT ANNOTATIONS (PNTE):

Sequence Source	Patent Reference
Not Given	US2004235730
	unclaimed
	SEQID 6

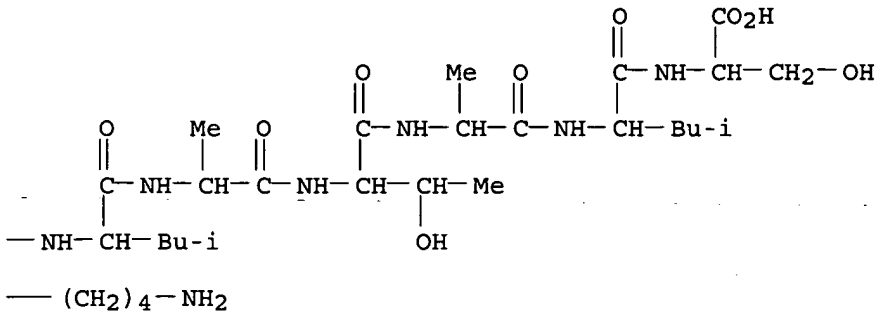
SEQ 1 YKLEGTTRLT RKRGLKLATA LS
===== ======
HITS AT: 6-16

RELATED SEQUENCES AVAILABLE WITH SEQLINK
MF C109 H194 N34 O31
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: PRP (Properties)
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); PROC (Process); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PROC (Process); PRP (Properties); USES (Uses)

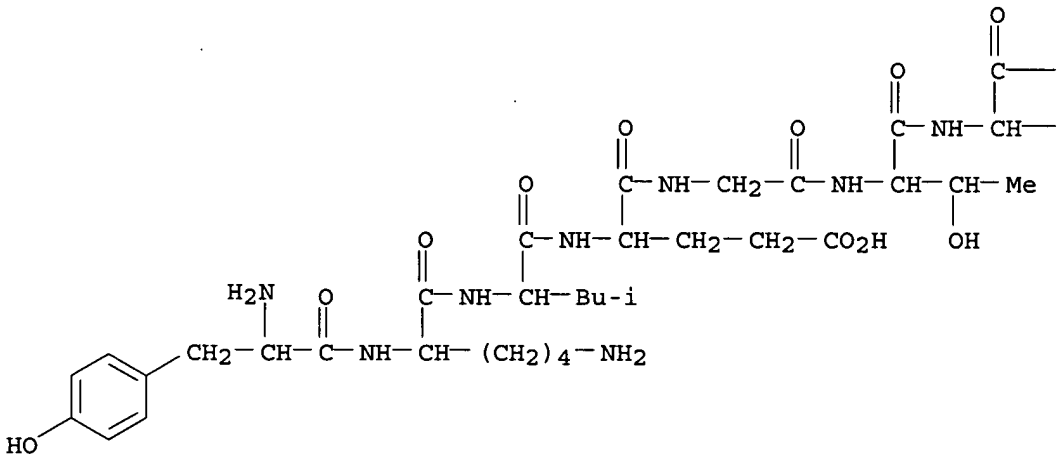
PAGE 1-B



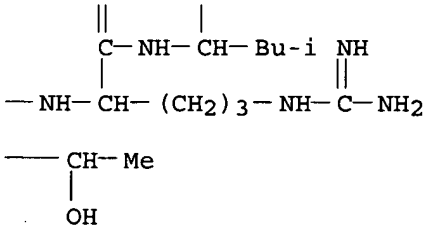
PAGE 1-C



PAGE 2-A



PAGE 2-B



3 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 142:2504

REFERENCE 2: 128:275115

REFERENCE 3: 127:140338

L61 ANSWER 12 OF 21 REGISTRY COPYRIGHT 2005 ACS on STN

RN **192937-45-4** REGISTRY
CN L-Leucine, glycyl-L-threonyl-L-threonyl-L-arginyl-L-leucyl-L-threonyl-L-arginyl-L-lysyl-L-arginylglycyl-L-leucyl-L-lysyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 4: PN: US20040235730 SEQID: 4 unclaimed sequence
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 13

PATENT ANNOTATIONS (PNTE):

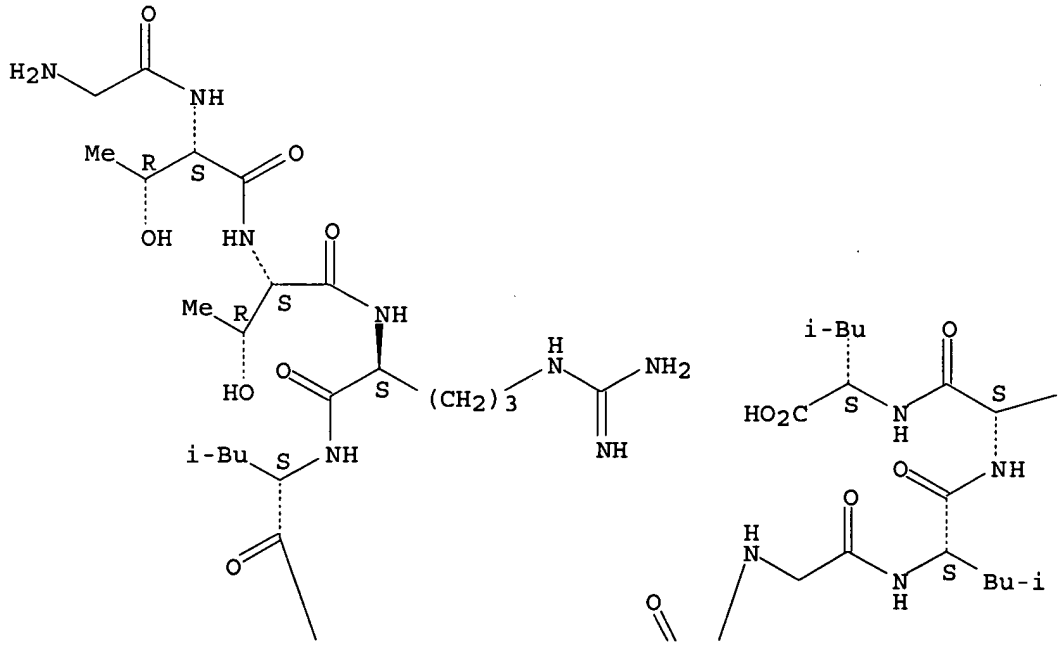
Sequence Source	Patent Reference
Not Given	US2004235730 unclaimed SEQID 4

SEQ 1 GTTRLTRKRG LKL
========= ==
HITS AT: 2-12

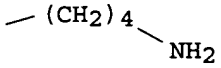
RELATED SEQUENCES AVAILABLE WITH SEQLINK
MF C64 H122 N24 O17
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: PRP (Properties)
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); PROC (Process); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PROC (Process); PRP (Properties); USES (Uses)

Absolute stereochemistry.

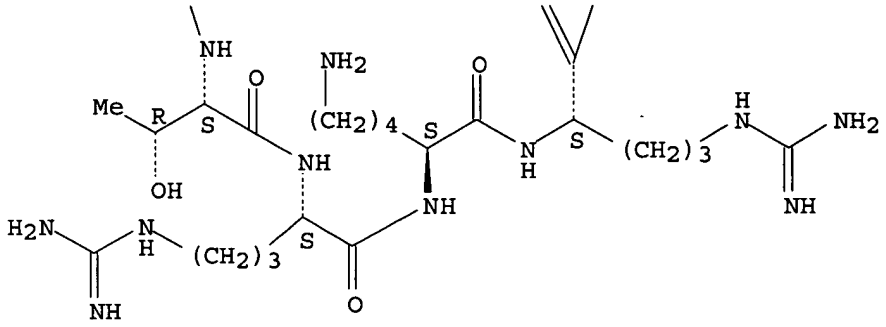
PAGE 1-A



PAGE 1-B



PAGE 2-A



3 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 142:2504

REFERENCE 2: 128:275115

REFERENCE 3: 127:140338

L61 ANSWER 13 OF 21 REGISTRY COPYRIGHT 2005 ACS on STN
RN **192937-44-3** REGISTRY
CN L-Leucine, L-leucyl-L-arginyl-L-leucyl-L-threonyl-L-arginyl-L-lysyl-L-arginylglycyl-L-leucyl-L-lysyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 3: PN: US20040235730 SEQID: 3 unclaimed sequence
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 11

PATENT ANNOTATIONS (PNTE):

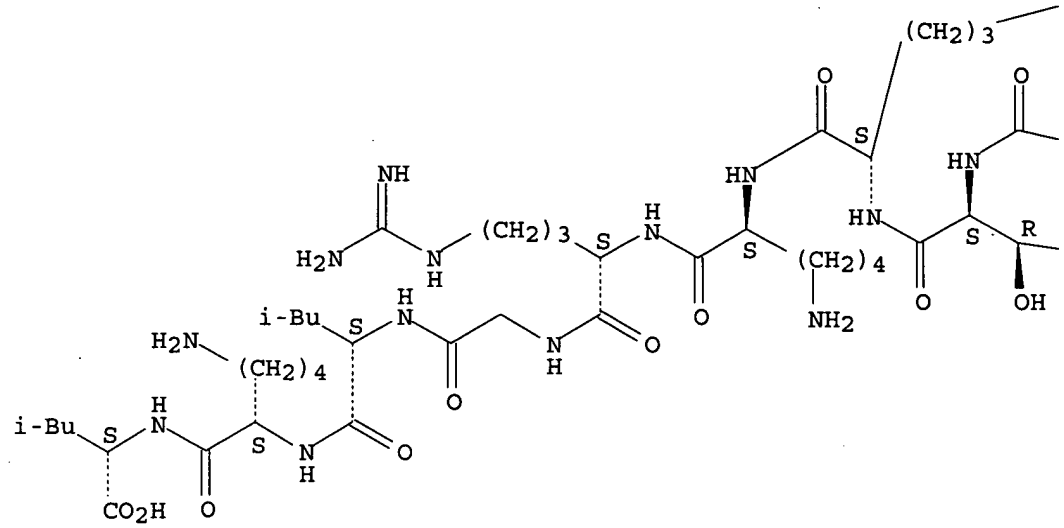
Sequence Source	Patent Reference
Not Given	US2004235730 unclaimed SEQID 3

SEQ 1 LRLTRKRGLK L
=========
HITS AT: 2-10

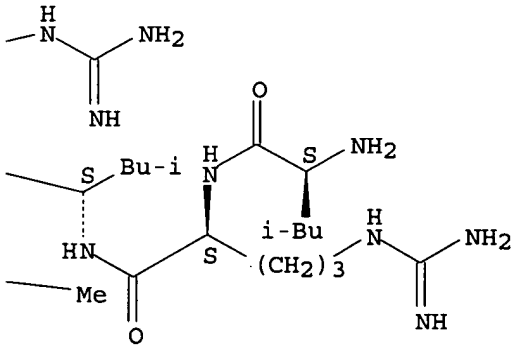
RELATED SEQUENCES AVAILABLE WITH SEQLINK
MF C60 H116 N22 O13
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: PRP (Properties)
RL.NP Roles from non-patents: BIOL (Biological study); PROC (Process); PRP (Properties); USES (Uses)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 142:2504

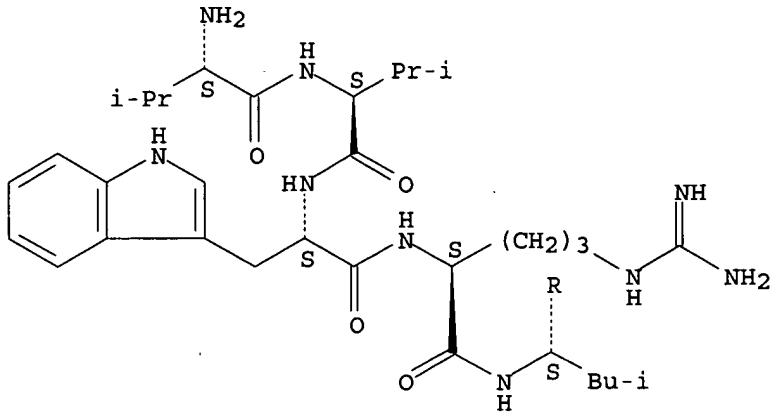
REFERENCE 2: 127:140338

L61 ANSWER 14 OF 21 REGISTRY COPYRIGHT 2005 ACS on STN
RN **186539-17-3** REGISTRY
CN L-Valine, L-valyl-L-valyl-L-tryptophyl-L-arginyl-L-leucyl-L-threonyl-L-arginyl-L-lysyl-L-arginylglycyl-L-leucyl-L-lysyl-L-valyl-L-valyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 15

SEQ 1 VVWRLTRKRG LKVVV
======= ==
HITS AT: 4-12
MF C84 H149 N27 O17
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA CAplus document type: Patent
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

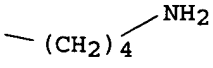
Absolute stereochemistry.

PAGE 1-A



*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

PAGE 2-B



```
                1 REFERENCES IN FILE CA (1907 TO DATE)
                1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
                1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE   1:  126:144561

L61  ANSWER 15 OF 21  REGISTRY  COPYRIGHT 2005 ACS on STN
RN   148846-78-0  REGISTRY
CN   3353-3510-Lipoprotein B 100 (human liver reduced) (9CI)  (CA INDEX NAME)
FS   PROTEIN SEQUENCE
SQL  158

SEQ      1 KLEGTTRLTR KRGLKLATAL SLSNKFVEGS HNSTVSLTTK NMEVSVATTT
               ====== =====
        51 KAQIPILRMN FKQELNGNTK SKPTVSSSME FKYDFNSSML YSTAKGAVDH
       101 KLSLESLTSY FSIESSTKGD VKGSVLSREY SGTIASEANT YLNSKSTRSS
       151 VKLQGTSK
HITS AT:   5-15
MF   Unspecified
CI   MAN
SR   CA
LC   STN Files:   CA, CAPLUS, USPATFULL
DT.CA  CAplus document type:  Patent
RL.P   Roles from patents:  ANST (Analytical study)
                1 REFERENCES IN FILE CA (1907 TO DATE)
                1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE   1:  119:67299

L61  ANSWER 16 OF 21  REGISTRY  COPYRIGHT 2005 ACS on STN
RN   148846-75-7  REGISTRY
CN   3124-3590-Lipoprotein B 100 (human liver reduced) (9CI)  (CA INDEX NAME)
FS   PROTEIN SEQUENCE
SQL  377

SEQ      1 ELPRTFQIPG YTVPVVNVEV SPFTIEMSAF GYVFPKAVSM PSFSILGSDV
        51 RVPSYTLILP SLELPVLHVP RNLKLSLPDF KELCTISHIF IPAMGNITYD
       101 FSFKSSVITL NTNAELFNQS DIVAHLLSSS SSVIDALQYK LEGTTRLTRK
                                                   =======
       151 RGLKLATALS LSNKFVEGSH NSTVSLTTKN MEVSVATTTK AQIPILRMNF
           ====
       201 KQELNGNTKS KPTVSSSMEF KYDFNSSMLY STAKGAVDHK LSLESLTSYF
       251 SIESSTKGDV KGSVLSREYS GTIASEANTY LNSKSTRSSV KLQGTSKIDD
       301 IWNLEVKENF AGEATLQRIY SLWEHSTKNH LQLEGLFFTN GEHTSKATLE
       351 LSPWQMSALV QVHASQPSSF HDFPDLG
HITS AT:   144-154
MF   Unspecified
CI   MAN
SR   CA
LC   STN Files:   CA, CAPLUS, USPATFULL
DT.CA  CAplus document type:  Patent
RL.P   Roles from patents:  ANST (Analytical study)
                1 REFERENCES IN FILE CA (1907 TO DATE)
                1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE   1:  119:67299

L61  ANSWER 17 OF 21  REGISTRY  COPYRIGHT 2005 ACS on STN
RN   136826-31-8  REGISTRY
CN   L-Lysine, L-arginyl-L-leucyl-L-threonyl-L-arginyl-L-lysyl-L-arginylglycyl-
     L-leucyl- (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   L-Lysine, N2-[N-[N-[N2-[N2-[N2-[N-(N-L-arginyl-L-leucyl)-L-threonyl]-L-
```

arginyl]-L-lysyl]-L-arginyl]glycyl]-L-leucyl]-
OTHER NAMES:
CN 3359-3367-Apolipoprotein B (synthetic)
CN 8: PN: US20040235730 SEQID: 8 claimed sequence
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 9

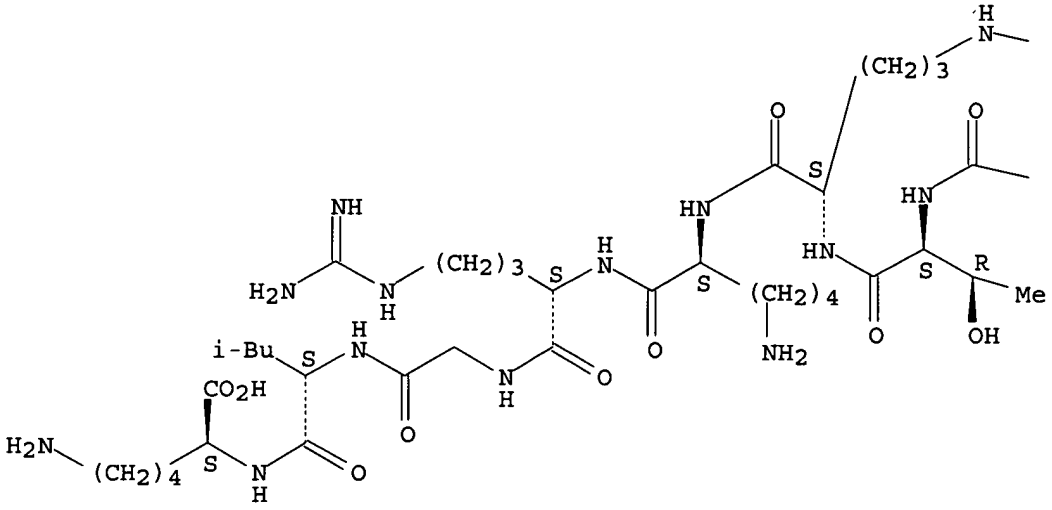
PATENT ANNOTATIONS (PNTE):

Sequence Source	Patent Reference
Not Given	US2004235730 claimed SEQID 8

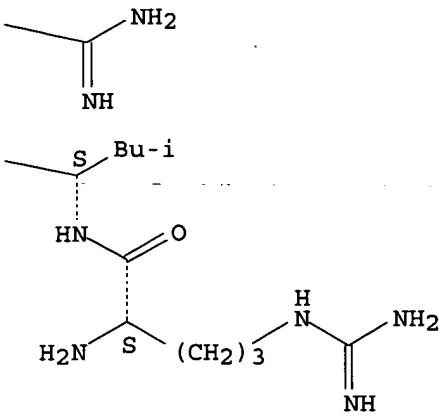
SEQ 1 RLTRKRGLK
=========
HITS AT: 1-9
MF C48 H94 N20 O11
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PRP (Properties); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PROC (Process); PRP (Properties)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



5 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 142:2504

REFERENCE 2: 128:43853

REFERENCE 3: 126:168110

REFERENCE 4: 116:125958

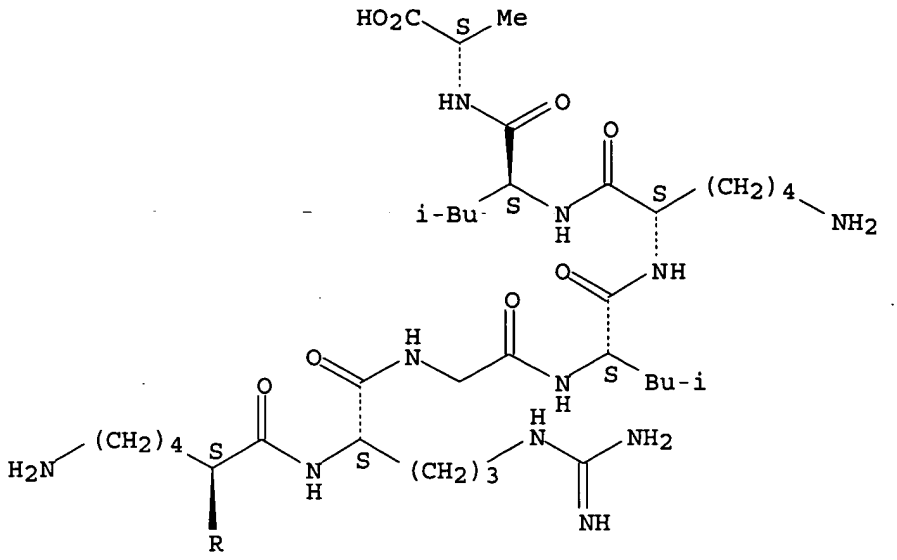
REFERENCE 5: 115:204835

L61 ANSWER 18 OF 21 REGISTRY COPYRIGHT 2005 ACS on STN
RN **135467-12-8** REGISTRY
CN L-Alanine, L-lysyl-L-methionyl-L-valyl-L-α-glutamyl-L-α-aspartyl-L-alanyl-L-lysyl-L-threonyl-L-threonyl-L-arginyl-L-leucyl-L-threonyl-L-arginyl-L-lysyl-L-arginylglycyl-L-leucyl-L-lysyl-L-leucyl-(9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 20

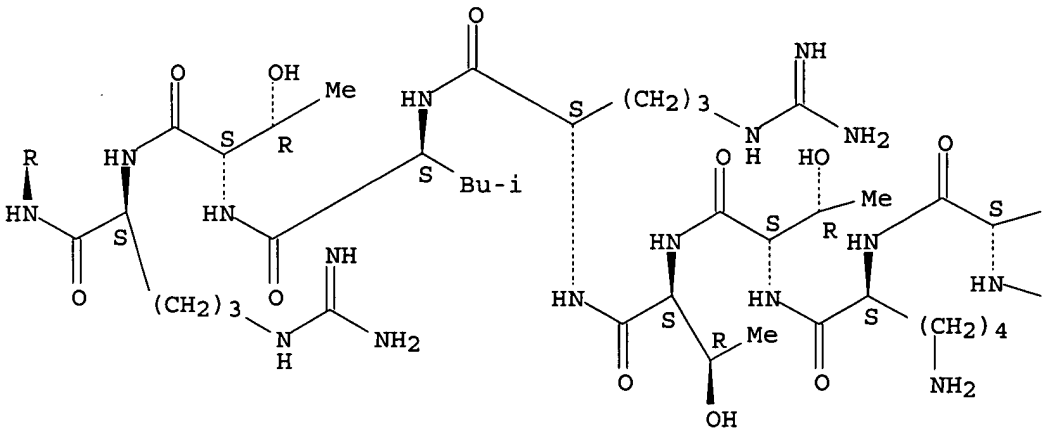
SEQ 1 KMVEDAKTTR LTRKRGLKLA
=== ========
HITS AT: 8-18
MF C99 H183 N33 O28 S
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RLD.P Roles for non-specific derivatives from patents: ANST (Analytical study)

Absolute stereochemistry.

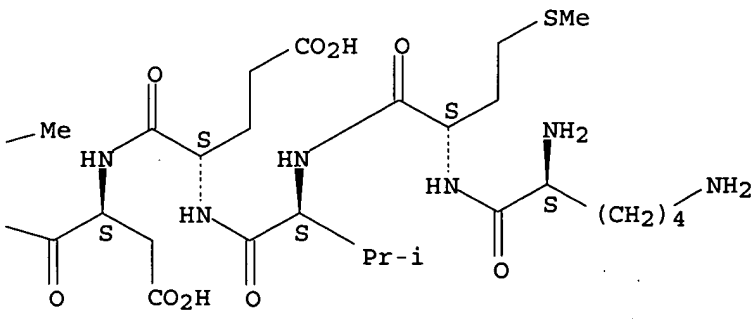
PAGE 1-A



PAGE 2-A



PAGE 2-B



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

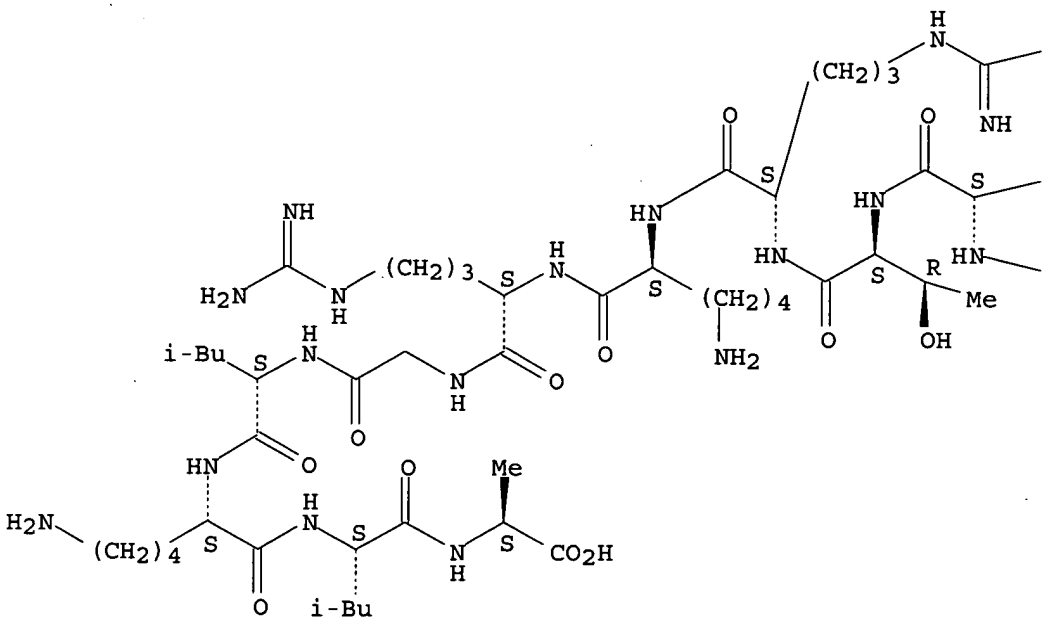
REFERENCE 1: 116:3218

L61 ANSWER 19 OF 21 REGISTRY COPYRIGHT 2005 ACS on STN
RN **135467-08-2** REGISTRY
CN L-Alanine, L-threonyl-L-threonyl-L-arginyl-L-leucyl-L-threonyl-L-arginyl-L-lysyl-L-arginylglycyl-L-leucyl-L-lysyl-L-leucyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 13

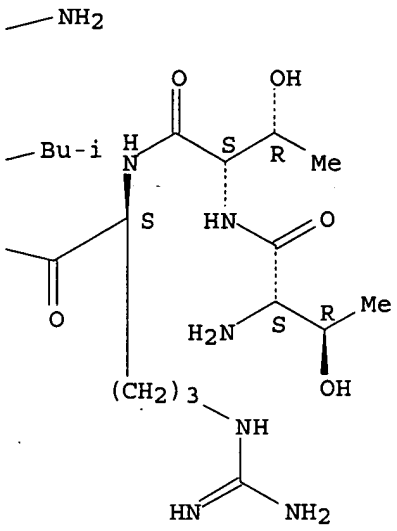
SEQ 1 TTRLTRKRGL KLA
========== =
HITS AT: 1-11
MF C65 H124 N24 O17
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RLD.P Roles for non-specific derivatives from patents: ANST (Analytical study)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 116:3218

L61 ANSWER 20 OF 21 REGISTRY COPYRIGHT 2005 ACS on STN
RN **105733-53-7** REGISTRY
CN Lipoprotein B 100 (human liver protein moiety reduced) (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE
SQL 4536

SEQ
```
      1 EEEMLENVSL VCPKDATRFK HLRKYTYNYE AESSSGVPGT ADSRSATRIN
     51 CKVELEVPQL CSFILKTSQC TLKEVYGFNP EGKALLKKTK NSEEFAAAMS
    101 RYELKLAIPE GKQVFLYPEK DEPTYILNIK RGIISALLVP PETEEAKQVL
    151 FLDTVYGNCS THFTVKTRKG NVATEISTER DLGQCDRFKP IRTGISPLAL
    201 IKGMTRPLST LISSSQSCQY TLDAKRKHVA EAICKEQHLF LPFSYNNKYG
    251 MVAQVTQTLK LEDTPKINSR FFGEGTKKMG LAFESTKSTS PPKQAEAVLK
    301 TLQELKKLTI SEQNIQRANL FNKLVTELRG LSDEAVTSLL PQLIEVSSPI
    351 TLQALVQCGQ PQCSTHILQW LKRVHANPLL IDVVTYLVAL IPEPSAQQLR
    401 EIFNMARDQR SRATLYALSH AVNNYHKTNP TGTQELLDIA NYLMEQIQDD
    451 CTGDEDYTYL ILRVIGNMGQ TMEQLTPELK SSILKCVQST KPSLMIQKAA
    501 IQALRKMEPK DKDQEVLLQT FLDDASPGDK RLAAYLMLMR SPSQADINKI
    551 VQILPWEQNE QVKNFVASHI ANILNSEELD IQDLKKLVKE ALKESQLPTV
    601 MDFRKFSRNY QLYKSVSLPS LDPASAKIEG NLIFDPNNYL PKESMLKTTL
    651 TAFGFASADL IEIGLEGKGF EPTLEALFGK QGFFPDSVNK ALYWVNGQVP
    701 DGVSKVLVDH FGYTKDDKHE QDMVNGIMLS VEKLIKDLKS KEVPEARAYL
    751 RILGEELGFA SLHDLQLLGK LLLMGARTLQ GIPQMIGEVI RKGSKNDFFL
    801 HYIFMENAFE LPTGAGLQLQ ISSSGVIAPG AKAGVKLEVA NMQAELVAKP
    851 SVSVEFVTNM GIIIPDFARS GVQMNTNFFH ESGLEAHVAL KAGKLKFIIP
    901 SPKRPVKLLS GGNTLHLVST TKTEVIPPLI ENRQSWSVCK QVFPGLNYCT
    951 SGAYSNASST DSASYYPLTG DTRLELELRP TGEIEQYSVS ATYELQREDR
   1001 ALVDTLKFVT QAEGAKQTEA TMTFKYNRQS MTLSSEVQIP DFDVDLGTIL
   1051 RVNDESTEGK TSYRLTLDIQ NKKITEVALM GHLSCDTKEE RKIKGVISIP
   1101 RLQAEARSEI LAHWSPAKLL LQMDSSATAY GSTVSKRVAW HYDEEKIEFE
   1151 WNTGTNVDTK KMTSNFPVDL SDYPKSLHMY ANRLLDHRVP ETDMTFRHVG
   1201 SKLIVAMSSW LQKASGSLPY TQTLQDHLNS LKEFNLQNMG LPDFHIPENL
   1251 FLKSDGRVKY TLNKNSLKIE IPLPFGGKSS RDLKMLETVR TPALHFKSVG
```

```
1301 FHLPSREFQV PTFTIPKLYQ LQVPLLGVLD LSTNVYSNLY NWSASYSGGN
1351 TSTDHFSLRA RYHMKADSVV DLLSYNVQGS GETTYDHKNT FTLSCDGSLR
1401 HKFLDSNIKF SHVEKLGNNP VSKGLLIFDA SSSWGPQMSA SVHLDSKKKQ
1451 HLFVKEVKID GQFRVSSFYA KGTYGLSCQR DPNTGRLNGE SNLRFNSSYL
1501 QGTNQITGRY EDGTLSLTST SDLQSGIIKN TASLKYENYE LTLKSDTNGK
1551 YKNFATSNKM DMTFSKQNAL LRSEYQADYE SLRFFSLLSG SLNSHGLELN
1601 ADILGTDKIN SGAHKATLRI GQDGISTSAT TNLKCSLLVL ENELNAELGL
1651 SGASMKLTTN GRFREHNAKF SLDGKAALTE LSLGSAYQAM ILGVDSKNIF
1701 NFKVSQEGLK LSNDMMGSYA EMKFDHTNSL NIAGLSLDFS SKLDNIYSSD
1751 KFYKQTVNLQ LQPYSLVTTL NSDLKYNALD LTNNGKLRLE PLKLHVAGNL
1801 KGAYQNNEIK HIYAISSAAL SASYKADTVA KVQGVEFSHR LNTDIAGLAS
1851 AIDMSTNYNS DSLHFSNVFR SVMAPFTMTI DAHTNGNGKL ALWGEHTGQL
1901 YSKFLLKAEP LAFTFSHDYK GSTSHHLVSR KSISAALEHK VSALLTPAEQ
1951 TGTWKLKTQF NNNEYSQDLD AYNTKDKIGV ELTGRTLADL TLLDSPIKVP
2001 LLLSEPINII DALEMRDAVE KPQEFTIVAF VKYDKNQDVH SINLPFFETL
2051 QEYFERNRQT IIVVVENVQR NLKHINIDQF VRKYRAALGK LPQQANDYLN
2101 SFNWERQVSH AKEKLTALTK KYRITENDIQ IALDDAKINF NEKLSQLQTY
2151 MIQFDQYIKD SYDLHDLKIA IANIIDEIIE KLKSLDEHYH IRVNLVKTIH
2201 DLHLFIENID FNKSGSSTAS WIQNVDTKYQ IRIQIQEKLQ QLKRHIQNID
2251 IQHLAGKLKQ HIEAIDVRVL LDQLGTTISF ERINDVLEHV KHFVINLIGD
2301 FEVAEKINAF RAKVHELIER YEVDQQIQVL MDKLVELTHQ YKLKETIQKL
2351 SNVLQQVKIK DYFEKLVGFI DDAVKKLNEL SFKTFIEDVN KFLDMLIKKL
2401 KSFDYHQFVD ETNDKIREVT QRLNGEIQAL ELPQKAEALK LFLEETKATV
2451 AVYLESLQDT KITLIINWLQ EALSSASLAH MKAKFRETLE DTRDRMYQMD
2501 IQQELQRYLS LVGQVYSTLV TYISDWWTLA AKNLTDFAEQ YSIQDWAKRM
2551 KALVEQGFTV PEIKTILGTM PAFEVSLQAL QKATFQTPDF IVPLTDLRIP
2601 SVQINFKDLK NIKIPSRFST PEFTILNTFH IPSFTIDFVE MKVKIIRTID
2651 QMQNSELQWP VPDIYLRDLK VEDIPLARIT LPDFRLPEIA IPEFIIPTLN
2701 LNDFQVPDLH IPEFQLPHIS HTIEVPTFGK LYSILKIQSP LFTLDANADI
2751 GNGTTSANEA GIAASITAKG ESKLEVLNFD FQANAQLSNP KINPLALKES
2801 VKFSSKYLRT EHGSEMLFFG NAIEGKSNTV ASLHTEKNTL ELSNGVIVKI
2851 NNQLTLDSNT KYFHKLNIPK LDFSSQADLR NEIKTLLKAG HIAWTSSGKG
2901 SWKWACPRFS DEGTHESQIS FTIEGPLTSF GLSNKINSKH LRVNQNLVYE
2951 SGSLNFSKLE IQSQVDSQHV GHSVLTAKGM ALFGEGKAEF TGRHDAHLNG
3001 KVIGTLKNSL FFSAQPFEIT ASTNNEGNLK VRFPLRLTGK IDFLNNYALF
3051 LSPSAQQASW QVSARFNQYK YNQNFSAGNN ENIMEAHVGI NGEANLDFLN
3101 IPLTIPEMRL PYTIITTPPL KDFSLWEKTG LKEFLKTTKQ SFDLSVKAQY
3151 KKNKHRHSIT NPLAVLCEFI SQSIKSFDRH FEKNRNNALD FVTKSYNETK
3201 IKFDKYKAEK SHDELPRTFQ IPGYTVPVVN VEVSPFTIEM SAFGYVFPKA
3251 VSMPSFSILG SDVRVPSYTL ILPSLELPVL HVPRNLKLSL PHFKELCTIS
3301 HIFIPAMGNI TYDFSFKSSV ITLNTNAELF NQSDIVAHLL SSSSSVIDAL
3351 QYKLEGTTRL TRKRGLKLAT ALSLSNKFVE GSHNSTVSLT TKNMEVSVAK
          ==== =======
3401 TTKAEIPILR MNFKQELNGN TKSKPTVSSS MEFKYDFNSS MLYSTAKGAV
3451 DHKLSLESLT SYFSIESSTK GDVKGSVLSR EYSGTIASEA NTYLNSKSTR
3501 SSVKLQGTSK IDDIWNLEVK ENFAGEATLQ RIYSLWEHST KNHLQLEGLF
3551 FTNGEHTSKA TLELSPWQMS ALVQVHASQP SSFHDFPDLG QEVALNANTK
3601 NQKIRWKNEV RIHSGSFQSQ VELSNDQEKA HLDIAGSLEG HLRFLKNIIL
3651 PVYDKSLWDF LKLDVTTSIG RRQHLRVSTA FVYTKNPNGY SFSIPVKVLA
3701 DKFITPGLKL NDLNSVLVMP TFHVPFTDLQ VPSCKLDFRE IQIYKKLRTS
3751 SFALNLPTLP EVKFPEVDVL TKYSQPEDSL IPFFEITVPE SQLTVSQFTL
3801 PKSVSDGIAA LDLNAVANKI ADFELPTIIV PEQTIEIPSI KFSVPAGIVI
3851 PSFQALTARF EVDSPVYNAT WSASLKNKAD YVETVLDSTC SSTVQFLEYE
3901 LNVLGTHKIE DGTLASKTKG TLAHRDFSAE YEEDGKFEGL QEWEGKAHLN
3951 IKSPAFTDLH LRYQKDKKGI STSAASPAVG TVGMDMDEDD DFSKWNFYYS
4001 PQSSPDKKLT IFKTELRVRE SDEETQIKVN WEEEAASGLL TSLKDNVPKA
4051 TGVLYDYVNK YHWEHTGLTL REVSSKLRRN LQNNAEWVYQ GAIRQIDDID
4101 VRFQKAASGT TGTYQEWKDK AQNLYQELLT QEGQASFQGL KDNVFDGLVR
4151 VTQKFHMKVK HLIDSLIDFL NFPRFQFPGK PGIYTREELC TMFIREVGTV
4201 LSQVYSKVHN GSEILFSYFQ DLVITLPFEL RKHKLIDVIS MYRELLKDLS
4251 KEAQEVFKAI QSLKTTEVLR NLQDLLQFIF QLIEDNIKQL KEMKFTYLIN
4301 YIQDEINTIF NDYIPYVFKL LKENLCLNLH KFNEFIQNEL QEASQELQQI
4351 HQYIMALREE YFDPSIVGWT VKYYELEEKI VSLIKNLLVA LKDFHSEYIV
```

```
      4401 SASNFTSQLS SQVEQFLHRN IQEYLSILTD PDGKGKEKIA ELSATAQEII
      4451 KSQAIATKKI ISDYHQQFRY KLQDFSDQLS DYYEKFIAES KRLIDLSIQN
      4501 YHTFLIYITE LLKKLQSTTV MNPYMKLAPG ELTIIL
HITS AT:   3357-3367
MF   Unspecified
CI   MAN
SR   CA
LC   STN Files:   CA, CAPLUS, TOXCENTER
DT.CA  CAplus document type:  Journal; Patent
RL.P   Roles from patents:  BIOL (Biological study); PROC (Process); PRP
       (Properties); USES (Uses)
RL.NP  Roles from non-patents:  PRP (Properties)
             5 REFERENCES IN FILE CA (1907 TO DATE)
             5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE   1:  130:62029

REFERENCE   2:  106:45908

REFERENCE   3:  106:45907

REFERENCE   4:  106:28383

REFERENCE   5:  106:13892

L61  ANSWER 21 OF 21  REGISTRY  COPYRIGHT 2005 ACS on STN
RN   105733-52-6  REGISTRY
CN   Lipoprotein B 100 (human liver precursor protein moiety reduced) (9CI)
     (CA INDEX NAME)
OTHER NAMES:
CN   Apolipoprotein B-100 (human)
FS   PROTEIN SEQUENCE
SQL  4563

SEQ      1 MDPPRPALLA LLALPALLLL LLAGARAEEE MLENVSLVCP KDATRFKHLR
        51 KYTYNYEAES SSGVPGTADS RSATRINCKV ELEVPQLCSF ILKTSQCTLK
       101 EVYGFNPEGK ALLKKTKNSE EFAAAMSRYE LKLAIPEGKQ VFLYPEKDEP
       151 TYILNIKRGI ISALLVPPET EEAKQVLFLD TVYGNCSTHF TVKTRKGNVA
       201 TEISTERDLG QCDRFKPIRT GISPLALIKG MTRPLSTLIS SSQSCQYTLD
       251 AKRKHVAEAI CKEQHLFLPF SYNNKYGMVA QVTQTLKLED TPKINSRFFG
       301 EGTKKMGLAF ESTKSTSPPK QAEAVLKTLQ ELKKLTISEQ NIQRANLFNK
       351 LVTELRGLSD EAVTSLLPQL IEVSSPITLQ ALVQCGQPQC STHILQWLKR
       401 VHANPLLIDV VTYLVALIPE PSAQQLREIF NMARDQRSRA TLYALSHAVN
       451 NYHKTNPTGT QELLDIANYL MEQIQDDCTG DEDYTYLILR VIGNMGQTME
       501 QLTPELKSSI LKCVQSTKPS LMIQKAAIQA LRKMEPKDKD QEVLLQTFLD
       551 DASPGDKRLA AYLMLMRSPS QADINKIVQI LPWEQNEQVK NFVASHIANI
       601 LNSEELDIQD LKKLVKEALK ESQLPTVMDF RKFSRNYQLY KSVSLPSLDP
       651 ASAKIEGNLI FDPNNYLPKE SMLKTTLTAF GFASADLIEI GLEGKGFEPT
       701 LEALFGKQGF FPDSVNKALY WVNGQVPDGV SKVLVDHFGY TKDDKHEQDM
       751 VNGIMLSVEK LIKDLKSKEV PEARAYLRIL GEELGFASLH DLQLLGKLLL
       801 MGARTLQGIP QMIGEVIRKG SKNDFFLHYI FMENAFELPT GAGLQLQISS
       851 SGVIAPGAKA GVKLEVANMQ AELVAKPSVS VEFVTNMGII IPDFARSGVQ
       901 MNTNFFHESG LEAHVALKAG KLKFIIPSPK RPVKLLSGGN TLHLVSTTKT
       951 EVIPPLIENR QSWSVCKQVF PGLNYCTSGA YSNASSTDSA SYYPLTGDTR
      1001 LELELRPTGE IEQYSVSATY ELQREDRALV DTLKFVTQAE GAKQTEATMT
      1051 FKYNRQSMTL SSEVQIPDFD VDLGTILRVN DESTEGKTSY RLTLDIQNKK
      1101 ITEVALMGHL SCDTKEERKI KGVISIPRLQ AEARSEILAH WSPAKLLLQM
      1151 DSSATAYGST VSKRVAWHYD EEKIEFEWNT GTNVDTKKMT SNFPVDLSDY
      1201 PKSLHMYANR LLDHRVPETD MTFRHVGSKL IVAMSSWLQK ASGSLPYTQT
      1251 LQDHLNSLKE FNLQNMGLPD FHIPENLFLK SDGRVKYTLN KNSLKIEIPL
      1301 PFGGKSSRDL KMLETVRTPA LHFKSVGFHL PSREFQVPTF TIPKLYQLQV
      1351 PLLGVLDLST NVYSNLYNWS ASYSGGNTST DHFSLRARYH MKADSVVDLL
      1401 SYNVQGSGET TYDHKNTFTL SCDGSLRHKF LDSNIKFSHV EKLGNNPVSK
```

```
1451 GLLIFDASSS WGPQMSASVH LDSKKKQHLF VKEVKIDGQF RVSSFYAKGT
1501 YGLSCQRDPN TGRLNGESNL RFNSSYLQGT NQITGRYEDG TLSLTSTSDL
1551 QSGIIKNTAS LKYENYELTL KSDTNGKYKN FATSNKMDMT FSKQNALLRS
1601 EYQADYESLR FFSLLSGSLN SHGLELNADI LGTDKINSGA HKATLRIGQD
1651 GISTSATTNL KCSLLVLENE LNAELGLSGA SMKLTTNGRF REHNAKFSLD
1701 GKAALTELSL GSAYQAMILG VDSKNIFNFK VSQEGLKLSN DMMGSYAEMK
1751 FDHTNSLNIA GLSLDFSSKL DNIYSSDKFY KQTVNLQLQP YSLVTTLNSD
1801 LKYNALDLTN NGKLRLEPLK LHVAGNLKGA YQNNEIKHIY AISSAALSAS
1851 YKADTVAKVQ GVEFSHRLNT DIAGLASAID MSTNYNSDSL HFSNVFRSVM
1901 APFTMTIDAH TNGNGKLALW GEHTGQLYSK FLLKAEPLAF TFSHDYKGST
1951 SHHLVSRKSI SAALEHKVSA LLTPAEQTGT WKLKTQFNNN EYSQDLDAYN
2001 TKDKIGVELT GRTLADLTLL DSPIKVPLLL SEPINIIDAL EMRDAVEKPQ
2051 EFTIVAFVKY DKNQDVHSIN LPFFETLQEY FERNRQTIIV VVENVQRNLK
2101 HINIDQFVRK YRAALGKLPQ QANDYLNSFN WERQVSHAKE KLTALTKKYR
2151 ITENDIQIAL DDAKINFNEK LSQLQTYMIQ FDQYIKDSYD LHDLKIAIAN
2201 IIDEIIEKLK SLDEHYHIRV NLVKTIHDLH LFIENIDFNK SGSSTASWIQ
2251 NVDTKYQIRI QIQEKLQQLK RHIQNIDIQH LAGKLKQHIE AIDVRVLLDQ
2301 LGTTISFERI NDVLEHVKHF VINLIGDFEV AEKINAFRAK VHELIERYEV
2351 DQQIQVLMDK LVELTHQYKL KETIQKLSNV LQQVKIKDYF EKLVGFIDDA
2401 VKKLNELSFK TFIEDVNKFL DMLIKKLKSF DYHQFVDETN DKIREVTQRL
2451 NGEIQALELP QKAEALKLFL EETKATVAVY LESLQDTKIT LIINWLQEAL
2501 SSASLAHMKA KFRETLEDTR DRMYQMDIQQ ELQRYLSLVG QVYSTLVTYI
2551 SDWWTLAAKN LTDFAEQYSI QDWAKRMKAL VEQGFTVPEI KTILGTMPAF
2601 EVSLQALQKA TFQTPDFIVP LTDLRIPSVQ INFKDLKNIK IPSRFSTPEF
2651 TILNTFHIPS FTIDFVEMKV KIIRTIDQMQ NSELQWPVPD IYLRDLKVED
2701 IPLARITLPD FRLPEIAIPE FIIPTLNLND FQVPDLHIPE FQLPHISHTI
2751 EVPTFGKLYS ILKIQSPLFT LDANADIGNG TTSANEAGIA ASITAKGESK
2801 LEVLNFDFQA NAQLSNPKIN PLALKESVKF SSKYLRTEHG SEMLFFGNAI
2851 EGKSNTVASL HTEKNTLELS NGVIVKINNQ LTLDSNTKYF HKLNIPKLDF
2901 SSQADLRNEI KTLLKAGHIA WTSSGKGSWK WACPRFSDEG THESQISFTI
2951 EGPLTSFGLS NKINSKHLRV NQNLVYESGS LNFSKLEIQS QVDSQHVGHS
3001 VLTAKGMALF GEGKAEFTGR HDAHLNGKVI GTLKNSLFFS AQPFEITAST
3051 NNEGNLKVRF PLRLTGKIDF LNNYALFLSP SAQQASWQVS ARFNQYKYNQ
3101 NFSAGNNENI MEAHVGINGE ANLDFLNIPL TIPEMRLPYT IITTPPLKDF
3151 SLWEKTGLKE FLKTTKQSFD LSVKAQYKKN KHRHSITNPL AVLCEFISQS
3201 IKSFDRHFEK NRNNALDFVT KSYNETKIKF DKYKAEKSHD ELPRTFQIPG
3251 YTVPVVNVEV SPFTIEMSAF GYVFPKAVSM PSFSILGSDV RVPSYTLILP
3301 SLELPVLHVP RNLKLSLPHF KELCTISHIF IPAMGNITYD FSFKSSVITL
3351 NTNAELFNQS DIVAHLLSSS SSVIDALQYK LEGTTRLTRK RGLKLATALS
                                    ======= ====
3401 LSNKFVEGSH NSTVSLTTKN MEVSVAKTTK AEIPILRMNF KQELNGNTKS
3451 KPTVSSSMEF KYDFNSSMLY STAKGAVDHK LSLESLTSYF SIESSTKGDV
3501 KGSVLSREYS GTIASEANTY LNSKSTRSSV KLQGTSKIDD IWNLEVKENF
3551 AGEATLQRIY SLWEHSTKNH LQLEGLFFTN GEHTSKATLE LSPWQMSALV
3601 QVHASQPSSF HDFPDLGQEV ALNANTKNQK IRWKNEVRIH SGSFQSQVEL
3651 SNDQEKAHLD IAGSLEGHLR FLKNIILPVY DKSLWDFLKL DVTTSIGRRQ
3701 HLRVSTAFVY TKNPNGYSFS IPVKVLADKF ITPGLKLNDL NSVLVMPTFH
3751 VPFTDLQVPS CKLDFREIQI YKKLRTSSFA LNLPTLPEVK FPEVDVLTKY
3801 SQPEDSLIPF FEITVPESQL TVSQFTLPKS VSDGIAALDL NAVANKIADF
3851 ELPTIIVPEQ TIEIPSIKFS VPAGIVIPSF QALTARFEVD SPVYNATWSA
3901 SLKNKADYVE TVLDSTCSST VQFLEYELNV LGTHKIEDGT LASKTKGTLA
3951 HRDFSAEYEE DGKFEGLQEW EGKAHLNIKS PAFTDLHLRY QKDKKGISTS
4001 AASPAVGTVG MDMDEDDDFS KWNFYYSPQS SPDKKLTIFK TELRVRESDE
4051 ETQIKVNWEE EAASGLLTSL KDNVPKATGV LYDYVNKYHW EHTGLTLREV
4101 SSKLRRNLQN NAEWVYQGAI RQIDDIDVRF QKAASGTTGT YQEWKDKAQN
4151 LYQELLTQEG QASFQGLKDN VFDGLVRVTQ KFHMKVKHLI DSLIDFLNFP
4201 RFQFPGKPGI YTREELCTMF IREVGTVLSQ VYSKVHNGSE ILFSYFQDLV
4251 ITLPFELRKH KLIDVISMYR ELLKDLSKEA QEVFKAIQSL KTTEVLRNLQ
4301 DLLQFIFQLI EDNIKQLKEM KFTYLINYIQ DEINTIFNDY IPYVFKLLKE
4351 NLCLNLHKFN EFIQNELQEA SQELQQIHQY IMALREEYFD PSIVGWTVKY
4401 YELEEKIVSL IKNLLVALKD FHSEYIVSAS NFTSQLSSQV EQFLHRNIQE
4451 YLSILTDPDG KGKEKIAELS ATAQEIIKSQ AIATKKIISD YHQQFRYKLQ
4501 DFSDQLSDYY EKFIAESKRL IDLSIQNYHT FLIYITELLK KLQSTTVMNP
```

```
      4551 YMKLAPGELT IIL
HITS AT:   3384-3394

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**
MF   Unspecified
CI   MAN
SR   CA
LC   STN Files:   CA, CAPLUS, TOXCENTER
DT.CA  CAplus document type:  Journal; Patent
RL.P   Roles from patents:  ANST (Analytical study); BIOL (Biological study);
       OCCU (Occurrence); PRP (Properties); USES (Uses)
RL.NP  Roles from non-patents:  PRP (Properties)
               4 REFERENCES IN FILE CA (1907 TO DATE)
               4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE   1:  135:151171

REFERENCE   2:  106:45907

REFERENCE   3:  106:28383

REFERENCE   4:  106:13892


=>
```